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ABSTRACT

Volume III of a four volume series presents an individualized education program (IEP) training package designed for administrators, assessment personnel, and others involved in the development and implementation of IEPs for handicapped children in Wyoming. Sections include the activities, purpose, objectives, materials, aids, and time needed to teach the following six objectives: (1) knowledge of the steps in IEP implementation, (2) ability to determine where to begin IEP implementation, (3) ability to select and match materials for teaching, (4) ability to employ skills to facilitate student learning, (5) skill in classroom management and ability to provide an environment conducive to effective teaching, and (6) ability to combine all elements presented into a workable plan which facilitates student instruction. Extensive handouts accompany each section. (PHR)

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A Training Package for Implementing the IEP Process in Wyoming

Developed by the Northwest Regional Resource Center
in conjunction with
the Wyoming Department of Education
Office of Exceptional Children
Hathaway Building
Cheyenne, Wyoming

VOLUME III

IEP IMPLEMENTATION

EC130811

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IMPLEMENTING THE IEP:

OVERVIEW OF STEPS TO IMPLEMENTING THE IEP

USAGE SUMMARY

Purpose: To familiarize participants with steps required to implement an IEP.

Objectives: Once participants have completed this module they will be able to:

--complete a simple task analysis

--define learner characteristics for a student in their class

--make an evaluation as to the appropriateness of the materials used with the above student.

--specify measurable criteria for short term objectives

--demonstrate selected techniques involved in direct instruction

--complete a checklist with missing steps to implementing the IEP.

--state why a particular sequence is inappropriate for a handicapped learner.

--revise an instructional sequence to make it appropriate for a handicapped learner.

--determine appropriate materials for a student with particular learning characteristics

--write one short-term objective from a long term goal

--suggest procedures to modify an instructional program

Materials: handouts 1-7
transparencies 1-8

Aids: Chalkboard, chalk, overhead projector, screen

Time: 4 hours, 10 minutes

An * in the script indicates that a transparency should be shown, or a handout or activity package should be distributed to the participants.

OVERVIEW OF STEPS

GUIDE FOR PRESENTATION

Outline	Transparency	Handout	Time Needed to Present
I. Introduction			
A. Purpose of module	T - 1		Five minutes
B. Objectives of module	T - 2		Five minutes
II. Step 1 - Develop the sequence of steps to be taught in attainment of short term objective using task analysis.			(30 minutes total)
A. Define task analysis			Five minutes
B. List steps	blank		Ten minutes
III. Step 2 - Decide how to teach the skill			(25 minutes total)
A. Stages of learning			Ten minutes
B. Methods			15 minutes
IV. Step 3 - Select teaching materials appropriate to short-term objectives			(50 minutes total)
A. Teacher options for selecting materials			
B. Adopting materials		1(H-1-5)	
		Activity 2	20 minutes
C. Adapting Materials		2(H-6) 3(H-7)	25 minutes
D. Designing materials	T - 5		Five minutes
V. Step 4 - Identify an appropriate monitoring system for each short-term objective.			(25 minutes total)
A. Reasons for selecting a measurement system			Five minutes
B. Measurement data relative to stages of learning			Ten minutes
		4(H-8) 5(H-9)	
		Activity 3	Ten minutes

IMPL[illegible]NTING THE IEP:
OVERVIEW OF STEPS

Outline	Transparency	Handout	Time needed to present
VI. Step 5 - Administer initial assessment skill probes to determine which skills in the sequence the student has.			(15 minutes total)
A. Options available for determining where to begin instruction.	T - 6		
VII. Step 6 - Provide direct instruction at the first sequence step in which the student does not demonstrate proficiency.			(50 minutes total)
A. Trainer review.			
B. Direction instruction contrasted with instruction given during independent child activities.			Five minutes
C. Teaching procedures used during direct instruction.			20 minutes
D. Components of direct instruction.			15 minutes
E. Trainer demonstration of direct instruction.			5 minutes
F. Participant demonstration of direct instruction techniques.			5 minutes
VIII. Step 7 - Assess skills taught using continuous measurement.			(10 minutes total)
A. Trainer review			
B. Reasons for ongoing assessment.			
IX. Step 8 - Implement data collection procedures and monitor progress.			(Ten minutes total)
A. Trainer review			
B. Implementing data collection procedures			
X. Step 9 - If mastery occurs, proceed to the next step in program sequence; if not, modify the task, materials, or strategies and re-teach.			(25 minutes total)

IMPLEMENTING THE IEP:
OVERVIEW OF STEPS

Outline	Transparency	Handout	Time needed to present
A. Methods for evaluating satisfactory progress.			Five minutes
B. Procedures to be used if program is ineffective in the acquisition stage.	T - 7		Ten minutes
C. Procedures to be followed if program is ineffective during the proficiency stage.	T - 8	6(H-10-13)	Ten minutes
XI. Group Activity			(40 minutes total)
A. Groups complete activity		Activity 4	20 minutes
B. Review of participant responses			20 minutes
		7(H-14-15)	

PROCESS OUTLINE FOR OVERVIEW

I. INTRODUCTION
  A. STATE PURPOSE OF MODULE
    1. STRESS THE FACT THAT THIS MODULE IS INTENDED TO DEVELOP AN AWARENESS OF THE IEP IMPLEMENTATION PROCESS.
* 2. SHOW T-1 *
    3. EXPLAIN THAT EACH STEP IS COVERED IN DEPTH IN OTHER COMPONENTS OR MODULES, BUT THAT YOU WILL BE PRESENTING A QUICK OVERVIEW OF EACH STEP AS LISTED.
  B. STATE OBJECTIVES OF MODULE
* 1. SHOW T-2 *
    2. ASK PARTICIPANTS THEIR OBJECTIVES FOR MODULE
    3. LIST PARTICIPANT OBJECTIVES ON BLACKBOARD
    4. CLARIFY ANY OBJECTIVES WHICH SEEM UNCLEAR AND INFORM PARTICIPANTS WHICH OF THEIR OBJECTIVES WILL BE COVERED AND WHICH WILL NOT.

II. STEP 1 - DEVELOP THE SEQUENCE OF STEPS TO BE TAUGHT IN ATTAINMENT OF THE SHORT TERM OBJECTIVE USING TASK ANALYSIS
  A. DEFINE TASK ANALYSIS
* B. STATE STEPS FOR TASK ANALYSIS; WRITE EACH STEP ON CHALK BOARD OR BLANK TRANSPARENCY *
    1. IDENTIFY TERMINAL BEHAVIOR
    2. SPECIFY ENTRY BEHAVIORS
    3. LIST THE STEPS LEADING TO THE TERMINAL BEHAVIOR
    4. SEQUENCE THE STEPS IN THE ORDER IN WHICH THEY WILL BE TAUGHT

* C. SHOW T-3 *
   1. CIRCLE THE PARTS WHICH CORRESPOND TO EACH STEP OF TASK ANALYSIS
   2. STRESS THE FACT THAT STEPS OBTAINED IN 4. ABOVE CORRESPOND TO A TEACHING SEQUENCE

* D. HAVE GROUP COMPLETE ACTIVITY 1 *

E. ALLOW 10 MINUTES FOR THE ACTIVITY

* F. USING T-4, REVIEW CORRECT RESPONSES FOR THE ACTIVITY *

III STEP 2 - DECIDE HOW TO TEACH THE SKILL
   A. REVIEW THE THREE STAGES OF LEARNING; WRITE EACH STAGE ON THE CHALKBOARD
      1. INITIAL ACQUISITION STAGE (THE STUDENT RECEIVES INSTRUCTION ON HOW TO DO A TASK; HE/SHE GAINS SOME KNOWLEDGE AND HAS MINIMAL USE OF SKILL)
         A. REMIND PARTICIPANTS THAT ALL LEARNING BEGINS WITH THE STAGE OF INITIAL ACQUISITION
         B. ASK PARTICIPANTS TO DESCRIBE THEIR BEHAVIORS DURING THE ACQUISITION STAGE OF LEARNING A NEW SKILL (E.G., SKIING, RACQUETBALL)
      2. PROFICIENCY STAGE (THE STUDENT IMPROVES ACCURACY AND RATE OF PERFORMANCE)
         A. ASK PARTICIPANTS TO DESCRIBE THEIR BEHAVIORS IN THE PROFICIENCY STAGE OF LEARNING THE SAME SKILL
      3. MAINTENANCE STAGE (THE STUDENT IS PROFICIENT AND ENGAGES IN ONGOING PRACTICE TO MAINTAIN SKILL)
         A. ASK PARTICIPANTS TO DESCRIBE THEIR BEHAVIORS IN THE MAINTENANCE STAGE OF THE SAME SKILL

B. RELATE TO PARTICIPANTS THAT EACH STAGE OF LEARNING REQUIRES THE USE OF DIFFERENT INSTRUCTIONAL METHODS AND MATERIALS

1. DIRECT TEACHER ACTIVITIES ARE REQUIRED WHEN THE STUDENT IS FIRST LEARNING A SKILL. THE TEACHER MUST:
    A. PROVIDE INSTRUCTION ON HOW TO PERFORM THE SKILL
    B. PROVIDE SUPERVISED PRACTICE OF NEW SKILLS
    C. PROVIDE CORRECTIVE FEEDBACK ON PERFORMANCE
2. INDEPENDENT PRACTICE ACTIVITIES ARE REQUIRED IN THE PROFICIENCY STAGE. THE TEACHER MUST:
    A. PROVIDE OPPORTUNITIES FOR EQUIVALENT AND ANALOGOUS PRACTICE
    B. TEACH INDEPENDENCE FOR TASK COMPLETION
    C. DEVELOP CHILD-DIRECTED TASK ACTIVITIES
    D. PROVIDE FEEDBACK ON RESPONSES MADE
3. ADDITIONAL INDEPENDENT TASKS ARE REQUIRED DURING THE MAINTENANCE STAGE. OPPORTUNITIES FOR ADDITIONAL INDEPENDENT TASKS MAY BE PROVIDED THROUGH:
    A. LEARNING CENTERS
    B. CROSS AGE TUTORS
4. REGARDLESS OF THE STUDENT'S STAGE OF LEARNING, THE PHYSICAL ENVIRONMENT AND TIME SCHEDULE SHOULD BE ARRANGED TO FACILITATE THE STUDENT'S LEARNING. THE TEACHER NEEDS TO:
    A. PROVIDE CONSISTENCY THROUGH TEACHING ROUTINE
    B. USE FLEXIBLE SCHEDULING TO ALLOW THE STUDENT TO WORK AT HIS/HER OWN RATE

c. ESTABLISH ACTIVITY CENTERS, SMALL GROUP AREAS AND INDIVIDUAL AREAS TO FOSTER INSTRUCTION AND STUDENT LEARNING.

IV. STEP 3 - SELECT TEACHING MATERIALS APPROPRIATE TO SHORT-TERM OBJECTIVES

A. REVIEW THE THREE OPTIONS AVAILABLE WHEN SELECTING MATERIAL TO TEACH SHORT-TERM OBJECTIVES:

1. ADOPT COMMERCIAL MATERIALS AND USE THEM
2. ADAPT COMMERCIAL MATERIALS TO THE SPECIFIC INSTRUCTIONAL NEEDS OF THE LEARNER
3. MAKE MATERIALS FOR INSTRUCTIONAL USE

* B. TO PRESENT MATERIAL ON ADOPTING MATERIALS, REVIEW HANDOUT 1 (H-1-5) WITH PARTICIPANTS *

1. STRESS THE FOUR BASIC QUESTIONS WHICH SHOULD GUIDE THE SELECTION OF MATERIALS
   a. WHO? - THE TARGET POPULATION
   b. WHY? - THE PURPOSE OF THE MATERIAL
   c. WHAT? - STRUCTURE, FORMAT, METHODOLOGY CONSTRUCTION, FUNCTION, AND QUANTITY
   d. HOW? - PROCESS, MANAGEMENT FEEDBACK
2. AFTER REVIEWING THE HANDOUT, ASK PARTICIPANTS TO TAKE FIVE MINUTES TO READ IT.

* 3. GIVE THE PARTICIPANTS ACTIVITY 2 AND ALLOW TEN MINUTES FOR THEM TO COMPLETE IT *

4. REVIEW PARTICIPANT RESPONSES TO ACTIVITY

C. TO PRESENT THE MATERIAL ON ADAPTING COMMERCIAL MATERIALS:

1. STRESS THE REASONS WHY SOME COMMERCIAL MATERIALS MAY NOT BE APPROPRIATE TO THE HANDICAPPED LEARNER AND THEREFORE MUST BE ADAPTED:
    a. THE STUDENT MAY NOT HAVE THE NECESSARY PREREQUISITE SKILLS TO UTILIZE THE MATERIAL
    b. THE STUDENT MAY NOT BE ABLE TO MAKE THE RESPONSES NECESSARY FOR SUCCESSFUL PERFORMANCE IN THE MATERIALS (E.G., WRITING LENGTHY VERBAL ANSWERS)
    c. THE INPUT MODE (E.G., VISUAL OR AUDITORY) MAY NOT MATCH THE INPUT NEEDS OF THE LEARNER
    d. THE STUDENT'S AGE, INTEREST LEVEL AND GRADE PLACEMENT MAY BE INCOMPATIBLE WITH THE MATERIAL
    e. THE FORMAT OF THE MATERIAL (E.G., SIZE OF TYPE, STYLE OF PRINT, AMOUNT OF MATERIAL ON THE PAGE) MAY BE INAPPROPRIATE FOR THE HANDICAPPED LEARNER.
    f. THE HANDICAPPED LEARNER NEEDS MORE MOTIVATIONAL TECHNIQUES AND THE AMOUNT CONTAINED IN THE MATERIAL MAY BE INSUFFICIENT
    g. THE GAPS IN THE INSTRUCTIONAL SEQUENCE MAY BE TOO LARGE FOR THE HANDICAPPED LEARNER
    h. THERE MAY BE INSUFFICIENT PRACTICE ACTIVITIES FOR THE EXCEPTIONAL LEARNER.

* 2. DISTRIBUTE HANDOUT 2 (H-6) AND INDICATE THAT THERE ARE WAYS IN WHICH PRACTICE ACTIVITIES CAN BE MODIFIED. *

3. ASK PARTICIPANTS TO SUGGEST AS MANY WAYS AS THEY CAN TO ADAPT MATERIALS. STRESS THE FACT THAT THEIR PAST EXPERIENCE IN TEACHING COUPLED WITH KNOWLEDGE ABOUT THE HANDICAPPED LEARNER SHOULD GIVE THEM A WEALTH OF IDEAS AS TO HOW TO ADAPT MATERIALS

* 4. ASK PARTICIPANTS TO MAKE SUGGESTIONS FOR ADAPTING MATERIALS. LIST THEIR RESPONSES ON CHALKBOARD, FLIP CHART OR BLANK TRANSPARENCY. *

* 5. GIVE PARTICIPANTS HANDOUT 3 (H-7) TO RECORD IDEAS WHICH HAVE BEEN LISTED *

D. TO PRESENT MATERIAL ON DESIGNING INSTRUCTIONAL MATERIALS:

1. REVIEW SOME OF THE POINTS WHICH WERE ADDRESSED IN HANDOUT 1

* 2. SHOW T-5

3. DISCUSS EACH POINT.

V STEP 4 - IDENTIFY AN APPROPRIATE MONITORING SYSTEM FOR EACH SHORT-TERM OBJECTIVE

A. REVIEW THE REASONS FOR SELECTING A MEASUREMENT SYSTEM

1. TO EVALUATE INTERVENTION (I.E., TO DETERMINE IF INSTRUCTIONAL TECHNIQUES ARE WORKING)

2. TO EVALUATE STUDENT PROGRESS (I.E., TO MEASURE STUDENT PROGRESS TOWARD ATTAINMENT OF SHORT TERM OBJECTIVES)

3. TO PROVIDE ACCOUNTABILITY (E.G., CSC, PARENTS, ETC.)

B. REVIEW THE KIND OF MEASUREMENT DATA RELATIVE TO THE STAGES OF LEARNING

1. DISCUSS MEASUREMENT OF ACCURACY IN THE ACQUISITION STAGE OF LEARNING
    A. PERCENT CORRECT
    B. PERCENT ERROR
2. DISCUSS MEASUREMENT OF RATE DURING THE PROFICIENCY (FLUENCY) STAGE
    A. NUMBER OF CORRECT RESPONSES
    B. NUMBER OF ERROR RESPONSES
3. DISCUSS USE OF DURATION DATA IN BOTH PROFICIENCY AND MAINTENANCE STAGE
4. DISCUSS THE USE OF LEVELS OF ASSISTANCE IN ACQUISITION STAGE
5. GIVE PARTICIPANTS HANDOUT 4 (H-8) AS A SUMMARY OF POINTS WHICH HAVE BEEN PRESENTED *
6. GIVE PARTICIPANTS HANDOUT 5 (H-9). DISCUSS APPROPRIATE MEASUREMENT CRITERIA FOR IEP GOAL AREAS. *
7. ASK PARTICIPANTS TO COMPLETE ACTIVITY 3. *
8. ALLOW 5 MINUTES FOR COMPLETION OF THE ACTIVITY
9. IDENTIFY INDIVIDUAL PARTICIPANTS TO GIVE THEIR RESPONSES (THERE IS NO ANSWER SHEET AS THERE ARE A VARIETY OF ANSWERS FOR EACH ITEM)

VI STEP 5 - ADMINISTER INITIAL ASSESSMENT SKILL PROBES TO DETERMINE WHICH SKILLS IN THE SEQUENCE THE STUDENT HAS.

- A. REVIEW THE OPTIONS AVAILABLE FOR DETERMINING WHERE TO BEGIN THE INSTRUCTIONAL SEQUENCE.
  - 1. PLACEMENT TESTS
    - * A. SHOW T-6 *
  - 2. DEVELOPMENTAL CHECKLISTS
    - * A. SECURE SAMPLES - SHOW TO PARTICIPANTS *
  - 3. TEACHER-DEVELOPED CHECKLISTS OR ASSESSMENT TASKS
    - A. REVIEW PAGES 39-40 OF INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED.
    - B. BRIEFLY SUMMARIZE STEPS TO BE FOLLOWED IN DESIGNING INFORMAL ASSESSMENT TOOLS

VII STEP 6 - PROVIDE DIRECT INSTRUCTION AT THE FIRST SEQUENCE STEP IN WHICH THE CHILD DOES NOT DEMONSTRATE PROFICIENCY

- A. REVIEW THOROUGHLY PAGES 52-65 OF INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED
- B. DISTINGUISH BETWEEN DIRECT INSTRUCTION AND THE INSTRUCTION GIVEN DURING INDEPENDENT CHILD ACTIVITIES
- C. REVIEW THE TEACHING PROCEDURES WHICH MAY BE EMPLOYED DURING DIRECT INSTRUCTION. WHERE POSSIBLE, PROVIDE CONCRETE PRACTICAL EXAMPLES. ALSO ASK PARTICIPANTS TO PROVIDE EXAMPLES OF EACH FROM THEIR OWN TEACHING EXPERIENCE.
  - 1. MODELING
  - 2. SHAPING
  - 3. ROUTINE DRILL

4. NOVEL DRILL
5. SLICING BACK
6. POSITIVE REINFORCEMENT--TANGIBLE
7. POSITIVE REINFORCEMENT--SOCIAL
8. POSITIVE REINFORCEMENT--TOKEN
9. CONTINGENCY CONTRACTING
10. IGNORING INAPPROPRIATE BEHAVIORS
11. PUNISHMENT
12. TIME OUT.

D. REVIEW SEVERAL COMPONENTS OF DIRECT INSTRUCTION. WHERE POSSIBLE, DEMONSTRATE THE TECHNIQUE

1. GAINING STUDENT ATTENTION PRIOR TO BEGINNING
2. INFORMING LEARNER OF THE OBJECTIVE OR TASK
3. RECALL/REVIEW OF PREVIOUSLY PRESENTED MATERIALS
4. PRESENTATION OF NEW STIMULUS MATERIALS
5. "LEARNING GUIDANCE"--INFORMATION PRESENTATION
6. DEMONSTRATION OF APPROPRIATE RESPONSE
7. ELICITING OF RESPONSE/CUES FOR RESPONSE
8. FEEDBACK--REINFORCEMENT
9. FEEDBACK--CORRECTION PROCEDURES
10. FEEDBACK--KNOWLEDGE OF RESPONSES (NUMBER CORRECT);
11. OPPORTUNITIES FOR RESPONSE (10+ TIMES)
12. TRANSFER/GENERALIZATION EXERCISE (ANALAGOUS)
13. CLOSURE/SUMMARY OF LESSON

E. DEMONSTRATE THE INTRODUCTION OF A NEW CONCEPT USING DIRECT INSTRUCTION METHODS. REFER TO THE MODULE ON DETERMINING HOW TO TEACH SKILLS FOR AN EXAMPLE OF DIRECT TEACHING TECHNIQUES.

F. FOLLOWING THE DEMONSTRATION SELECT SEVERAL COMPONENTS OF DIRECT INSTRUCTION AND ASK PARTICIPANTS TO DEMONSTRATE THE TECHNIQUES:

1. GAINING STUDENT ATTENTION
2. INFORMING THE LEARNER OF THE OBJECTIVE
3. DEMONSTRATION OF APPROPRIATE RESPONSE
4. ELICITING RESPONSES/CUEING FOR RESPONSE
5. FEEDBACK--REINFORCEMENT
6. FEEDBACK--CORRECTION PROCEDURES
7. SUMMARIZING TASK PRESENTATION

VIII STEP 7 - ASSESS SKILLS TAUGHT USING CONTINUOUS MEASUREMENT

A. REVIEW PAGES 71-72 IN LOWENBRAUN & AFFLECK, TEACHING MILDLY HANDICAPPED CHILDREN IN REGULAR CLASSES.

B. BRIEFLY DISCUSS THE REASONS FOR ONGOING ASSESSMENT.

1. TEACHER BENEFITS
2. CHILD BENEFITS
3. COMMUNICATION BENEFITS.

IX STEP 8 - IMPLEMENT DATA COLLECTION PROCEDURES AND MONITOR PROGRESS.

A. REVIEW PAGES 5.10.33-34 IN SUGGESTED PROCEDURES FOR THE IMPLEMENTATION OF THE IEP PROCESS IN WYOMING EDUCATIONAL AGENCIES.

B. DISCUSS EACH OF THE FOLLOWING POINTS FOR IMPLEMENTING DATA

COLLECTION PROCEDURES

1. DETERMINE HOW OFTEN TO COLLECT DATA
2. DETERMINE THE LENGTH OF TIME TO COLLECT DATA
3. DETERMINE WHO WILL COLLECT DATA
4. DETERMINE WHAT TOOLS WILL BE USED TO COUNT AND RECORD DATA
5. ESTABLISH A CLASSROOM ROUTINE FOR COLLECTING DATA.

X STEP 9 - IF MASTERY OCCURS, PROCEED TO THE NEXT STEP IN PROGRAM SEQUENCE; IF NOT, MODIFY THE TASK, MATERIALS, OR STRATEGIES AND RETEACH

A. DISCUSS METHODS FOR EVALUATING SATISFACTORY PROGRESS
   1. COMPARE PRESENT PERFORMANCE WITH PREVIOUS RATE OF MASTERY
   2. LOOK CAREFULLY AT THE TREND OF DATA, DETERMINE IF THERE HAS BEEN ANY NOTICEABLE CHANGE OVER TIME
   3. OBSERVE STUDENT'S BEHAVIOR FOR SIGNS OF FRUSTRATION, BOREDOM, AVOIDANCE

B. DISCUSS PROCEDURES TO BE FOLLOWED IF THE PROGRAM IS INEFFECTIVE IN THE ACQUISITION STAGE.
   1. MODIFYING THE LONG TERM OBJECTIVE
   2. SLICING BACK THE SEQUENCE STEPS
   3. CHANGING THE INSTRUCTIONAL PROCEDURES

* C. SHOW T-7 AS SUMMARY OF ABOVE POINTS *

D. DISCUSS PROCEDURES TO BE FOLLOWED IF THE PROGRAM IS INEFFECTIVE DURING THE PROFICIENCY STAGE
   1. CHANGING PRACTICE ACTIVITIES

2. INCREASING OR DECREASING PRACTICE TIME
3. PROVIDING A MORE VARIED SELECTION OF PRACTICE MATERIALS
4. CHANGING CONSEQUENCES FOR RESPONSES ON PRACTICE MATERIALS

* E. SHOW T-8 AS A SUMMARY OF ABOVE POINTS *

* F. GIVE PARTICIPANTS HANDOUT 6 (H-10-13); DISCUSS VARIOUS INTERVENTION PROCEDURES WITH THEM *

XI GROUP ACTIVITY

* A. HAVE PARTICIPANTS FORM GROUPS OF 3; ASK THEM TO COMPLETE ACTIVITY 4. ALLOW 20 MINUTES FOR COMPLETION OF THE ACTIVITY *

B. REVIEW PARTICIPANT RESPONSES TO THE ACTIVITY. ALLOW 20 MINUTES FOR THE REVIEW

* C. GIVE PARTICIPANTS HANDOUT 7 (H-14-15) AFTER THE REVIEW *

Activity 1

Trainer's Directions

1) Duplicate enough copies of the game for every 2 people.
2) Cut the cards out and place them in envelopes.
3) Direct participants to form groups of 2.
4) Give one envelope to each group.
5) Explain to the groups that the envelopes contain sequence steps to a task analysis.
6) Write the following terminal objective on the chalkboard:

   "Given verbal directions pupil will wash hands independently."
7) Direct participants to arrange cards in correct sequence.
8) Allow 10 minutes to complete the activity.
9) Using T-4, take 5 minutes to review the correct responses to the activity.

Activity 1

Task Analysis Game

TURN OFF WATER

PUT HANDS IN WATER

RUB HANDS TOGETHER

DRY HANDS

TURN ON WATER

RINSE HANDS UNDER WATER

PUT DOWN TOWEL

PUT DOWN SOAP

PICK UP SOAP

COME TO SINK

RUB THE SOAP ON THE HANDS

PICK UP TOWEL

Complete Worksheet: 10 min.

Discuss Responses: 10 min.

Activity 2

Trainer's Directions

1) Duplicate enough copies for each participant.
2) Distribute copies to participants.
3) Direct them to complete the activity sheet individually.
4) Allow 10 minutes to complete the activity.
5) Select 6 participants to share their responses to the activity.
6) Allow 10 minutes for the sharing.

Activity 2

A. Think of a particular handicapped student in your class. Write down some characteristics of this student which should be considered when selecting materials for him/her.

B. Considering what you now know about selecting materials, are the materials which you are using appropriate to this student? Why? Why not?

Complete Worksheet: 5 min.
Share Responses: 5 min.

Activity 3

1) Duplicate enough copies for each participant.
2) Distribute copies to participants.
3) Direct them to complete the activity sheet individually.
4) Allow 5 minutes for completion of the worksheet.
5) Select 7 participants to share answers.
6) Explain that there are several possible answers to each item.
7) Allow 5 minutes for sharing responses.

Activity 3

Specify appropriate measurement criteria for these objectives:

Objective	Criteria
1. When orally directed, Larry will write the letters of the alphabet.	
2. Judy will read orally from a second grade text.	
3. Anita will orally answer questions on a fourth grade paragraph.	
4. Carol will demonstrate on task behavior.	
5. When orally directed, Keith will write math facts sums to 18.	
6. Alan will sort 25 bolts from a container.	
7. Given the standard school lunch, Bob will feed himself unassisted with a spoon.	

Complete Worksheet: 20 min.

Review Responses: 20 min.

Activity 4

1) Duplicate enough copies for each participant.
2) Distribute copies to participants.
3) Divide them into groups of 3.
4) Explain that they are to work together completing the activity.
    a) The group should designate one person in each group to be a recorder.
    b) After review of each task and discussion, the recorder should write down the responses.
5) Allow 20 minutes for completion of the activity.
6) Ask a recorder from each group to supply one answer to each task.
7) Give participants handout 7 after the review.

Activity 4

Task 1 Fill in the missing steps to implementing the IEP.

1. ____
2. Decide how to teach the skill.
3. ____
4. ____
5. Administer initial skill probes to determine which skills in the sequence the student has.
6. ____
7. Assess skills taught using continuous measurement.
8. ____
9. If mastery occurs, proceed to the next step in program sequence; if not, modify the task, teaching materials or strategies and reteach.

IMPLEMENTING THE IEP:

OVERVIEW OF STEPS

Task 2A Why is this instructional sequence inappropriate for a handicapped learner?

-Solves addition problems

2 digit + 2 digit with regrouping

3 digit + 3 digit with regrouping

4 digit + 4 digit with regrouping

Task 2B Revise the above sequence to make it appropriate for a handicapped learner. The beginning sequence steps have been provided below:

2 digit + 2 digit with regrouping

3 digit + 1 digit with regrouping

IMPLEMENTING THE IEP:

OVERVIEW OF STEPS

Task 3 What kind of reading materials would you select for a student who has these characteristics?

-Male; CA 12, MA 10, mild mental retardation, poor self concept, low frustration tolerance, visual motor difficulties, does not perform well in large groups, lacks motivation, has strengths in auditory vocal channel, likes music, reads material at the third grade level.

Task 4 Given the long term goal "decode phonetically regular one syllable words", write a short term objective and specify appropriate measurement criteria.

Objective Criteria

Task 5 Jane is a second grader who reads at a rate of 50 WPM with 2 or less errors. From May 20th - May 22nd her rate decreased to 40 WPM and her errors increased to 8. What procedures should her teacher consider in order to increase her rate and decrease the errors?

IMPLEMENTING THE IEP:

OVERVIEW OF STEPS

Handout 1

H1 - H5

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Selecting and Developing Educational Materials: An Inquiry Model
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HANDOUT 2

Modifications in practice activities

PROBLEM	POSSIBLE MODIFICATIONS
Does not include enough items.	Pair with other similar tasks.
Does not have enough practice activities.	Supplement with teacher-made activities. Supplement with activities from ther commercial materials.
Directions are too difficult.	Verbally present the tasks. Pair the worksheet with an auditory tape that explains directions. Add examples to the practice page. Go through a number of items during small-group instruction. Write alternate sets of directions. Highlight the important words in the directions (underline, use marking pen). Pair children with better readers to assist them when directions are difficult.
Too many tasks are presented on the page.	Cut the page into a number of segments. Visually cue the change of task on the page (e.g., cue with marking pen).
No feedback and correction procedures are provided.	Make keys for practice activities. Have more able students complete activities and use as keys after correcting. Set aside time to review pages with children. Designate peer as "paper checker." Correct as a group during direct teacher instruction.

Suggestions for Adapting Materials

GUIDELINES FOR CHOOSING DATA

You want information about: (critical dimensions)	So you will collect: (type of data)	Which requires the following information:
Changes in the pupil's accuracy of performance	Percent Data	Correct # of correct responses, Total # of responses Error # of error responses Total # of responses
Changes in the pupil's proficiency of performance (accuracy and fluency)	Rate Data	# of correct responses, # of error responses, Length of time measured
How quickly a pupil responds to a cue	Latency Data	Time elapsing from the completion of the cue to the beginning of the pupil's response
[illegible]w long a pupil's response lasts	Duration Data	Time elapsing from the initiation of the pupil's response to the completion of the response
How much help a pupil requires in completing a task (Note that in a sense it is the teacher's behavior which is being monitored here.)	Levels of Assistance	# of trials completed for each designated level of assistance (e.g., # trials with verbal cue, # trials with demonstration # trials with full physical assistance, etc.)

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[18] Lynch, V., Flanagan, K., & Pennell, O. Implementing data collection and charting, conventions in Harring (Ed). The Experimental Education Training Program: An Inservice Program for Personnel Serving the Severely Handicapped. Seattle, Washington, 1976.

SOME APPROPRIATE MEASUREMENT CRITERIA FOR GOAL AREAS[19]

Number of Completions for Specific Tasks

Survival Tasks
Self-help Tasks
Job/Vocational Tasks
Life Sports
Classroom Behavior

Duration or Average Duration

Classroom Behavior
Staying On Task
Free-Time Activities

Accuracy or Percent

Comprehension
Grammar
Speech
Spelling Words
Sentence Structure
Telling Time
Measurement
Sequencing
Following Directions
Tracing
Writing Math Computation Answers

Rate or Fluency

Word Attack Skills
Reading Words, Phrases, Sentences
Saying or Writing Math Fact Answers
Writing Math Computation Answers
Saying or Writing Numbers or Letters
Saying Letter Sounds
Telling Time
Measurement
Writing Manuscript or Cursive
Spelling Words
Sequencing

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[19] From: Archer, A. Implementing individualized educational plans. Workshop material prepared for Idaho State Department of Education, Boise, Idaho, 1978.

Intervention Notes

There are two major intervention considerations:

(1) How do you decide when to change?
(2) What are the things that you can change?

Entry skills for interventions:

(1) charting aims
(2) drawing program guidelines
(3) drawing phase-change lines

1. To analyze your data you need to utilize a decision rule. Examples of data decision rules that have been used in the past are:

   2-day decision rules for number correct and errors
   ***3-day decision rules for number correct and errors
   meet/beat decision rules for number correct and errors
   no program guideline/3-day below or meet for number correct
   no program guideline/3-day above or meet for errors

   ***This is the rule that we suggest you utilize when you are just starting data analysis.

The 3-day decision rule

--Intervene (change) when number correct falls below the program guideline 3 consecutive days.

--Intervene (change) when errors rise above the program guideline 3 consecutive days.

--record that a change is being made with a phase-change line

--record on that phase-change line what the change is

2. What are the things you can change?

   (1) the instructional program, or
   (2) the motivational considerations

Instructional:

*Change the location of the instruction

(1) from the regular classroom to the resource room
(2) from the resource room to the regular classroom
(3) to a different place in the room
(4) by changing spatial position in relation to the student/s

*Materials prepared by Diane Bevis, Support Competency Assistance Training (SCAT) Project. Boise, Idaho.

*Change the time of the instruction

(1) during the day e.g.,
(2) by increasing, 5-minute drill extended to 15 minutes
(3) by decreasing, e.g., 30-minute drill shortened to 10 minutes

*Change the materials

(1) from/to the blackboard
from/to the overhead screen
from/to flash cards
from/to workbook/testbook
from/to worksheet
etc.
(2) by changing auditory cues:
controlled speaking
volume
(3) by changing the format:
  (a) larger writing
  (b) fewer problems per page
  (c) colored paper
  (d) ordering of materials or content
  (e) vertical or horizonal position
(4) by changing the amount covered

*Change the personnel

(1) from regular classroom teacher doing instruction to resource room teacher doing instruction
(2) from the resource room teacher doing the instruction to the regular classroom teacher
(3) from/to the aide
(4) from/to peer tutor
(5) from/to resource room teacher

*Change in the objectives

(1) by modifying the long-term objective
(2) by modifying the short-term objective
(3) by modifying the steps of the sequence (slicing back).
(4) by modifying the steps of the sequence (jumping ahead).
(5) (change student's placement in the instructional sequence).

*Change in the instructional delivery

(1) by changing the size of the group
(2) from/to large group
(3) from/to small group
(4) from/to team
(5) from/to 1:1
(6) from/to self-directed
(7) from/to independent

*Change the student response during instruction and practice

- (1) from/to oral
- (2) from/to written
- (3) from/to motor

*Change teaching procedures

- (1) by changing the modeling procedures:
  - (a) verbal
  - (b) motor
  - (c) written
- (2) by changing the cueing procedures:
  - (a) verbal
  - (b) motor
  - (c) written
- (3) by changing the shaping procedures
- (4) by changing the amount of instruction:
  - (a) skipping ahead
  - (b) slicing back
  - (c) errors only
- (5) by changing the reinforcement schedule for instruction
- (6) by changing reinforcements:
  - (a) from/to social
  - (b) from/to tangible
  - (c) from/to symbolic
- (7) by ignoring inappropriate behavior
- (8) by changing instruction introductions:
  - (a) ways to gain student attention
  - (b) information about day's objective
  - (c) review and recall procedures
  - (d) warm-up procedures
- (9) by changing types of information:
  - (a) new
  - (b) old/new
  - (c) errors only
- (10) by changing feedback:
  - (a) reinforcement
  - (b) correction procedures
  - (c) ignore or consequate incorrect responses
- (11) by changing opportunities for practice/drill
  - (a) increase
  - (b) decrease
  - (c) errors only
- (12) by changing closure/summary of lesson
- (13) by changing direction for next step activity

OVERVIEW OF STEPS

*Change measurement procedures

(1) by changing counting procedures
(2) by changing recording procedures
(3) by changing assessment trials-to continuos
(4) by changing aims:
  (a) no aim
  (b) aim too high
  (c) aim too low
(5) by time change:
  (a) too long--no endurance
  (b) too short--too little time to exhibit

Motivational

*Change the kinds of consequences

(1) student preference:
  (a) choice
  (b) amount
(2) teacher preference:
  (a) choice
  (b) amount
(3) by changing the types:
  (a) social--praise, attention, ignoring, hugs
  (b) symbolic--happy cards, stars, checks, graphs
  (c) tangible--use of free time, games

*Change ratio between behaviors and consequences

(1) more or less behavior based on amount of response
(2) more or less behavior based on time

*Change motivation procedures

(1) by comparing previous day's performance before timing
(2) by changing warm-up procedures for timings
(3) by letting students chart own data
(4) by letting peers time peers and chart data
(5) by letting the regular classroom teacher do the timing
(6) by letting the child set own aims.

THERE ARE MANY, MANY MORE INTERVENTIONS, BUT THIS SHOULD GIVE YOU A GOOD START.

HANDOUT 7

Answers to Activity 4

Task 1 - Fill in the missing steps to implementing the IEP.

1. Develop the sequence of steps to be taught in the attainment of the short term objective-task analysis.

3. Select teaching materials appropriate to short-term objectives.

4. Identify an appropriate monitoring system for each short-term objective.

6. Using the materials selected, provide direct instruction at the first sequence step in which the child does not demonstrate proficiency.

8. Implement data collection procedures and monitor progress.

Task 2A- Why is this instructional sequence inappropriate for a handicapped learner?

Solves addition problems
2 digit + 2 digit with regrouping
3 digit + 3 digit with regrouping
4 digit + 4 digit with regrouping

This sequence is inappropriate because the sequence steps are too large to be easily mastered by the handicapped learner. The handicapped learner needs sequences which proceed in small, logical steps.

Task 2B - Revise the above sequence to make it appropriate for a handicapped learner. The beginning sequence steps have been provided below:

2 digit + 2 digit with regrouping
3 digit + 1 digit with regrouping
3 digit + 2 digit with regrouping
3 digit + 3 digit with regrouping
4 digit + 1 digit with regrouping
4 digit + 2 digit with regrouping
4 digit + 3 digit with regrouping
4 digit + 4 digit with regrouping

Task 3 - What kinds of reading materials would you select for a student who has these characteristics? Male; CA 12, MA 10, mild mental retardation, poor self concept, low frustration tolerance, visual motor difficulties, does not perform well in large groups, lacks motivation, has strengths in the auditory-vocal channel, likes music, reads material at the third grade level.

The material selected should:

combine a taped (auditory) format with visual presentation
require limited motor responses
contain reinforcement for correct responses
use devices to capture and maintain interest
be appropriate to age and ability level
provide instruction on individual basis
provide numerous opportunities for practice
provides ample opportunity to review previously learned material

Task 4 - Given the long term goal, "decode phonetically regular one syllable words", write a short term objective and specify appropriate measurement criteria. Any one of a number of short-term objectives could be developed for the long term goal. An example of a short term objective might be:

Objective: When presented with a list of 20 words, Shawn will decode CVCE words with 100% accuracy. (100% accuracy is the measurement criteria.)

Task 5 - Jane is a second grader who reads at a rate of 50 wpm with 2 or less errors. From May 20th - May 22nd, her rate decreased to 40 wpm and her errors increased to 8. What procedures should her teacher consider in order to increase her rate and decrease her errors?

Since her teacher is collecting rate data, we can assume that Jane is in the proficiency stage of learning. Some of the procedures which might be used to modify the program during the proficiency stage are to:

alter practice activities
increase or decrease practice time
provide a more varied selection of practice activities
change the consequences which follow the responses in practice activities.

IMPLEMENTING THE IEP

1. DEVELOP THE SEQUENCE OF STEPS TO BE TAUGHT IN THE ATTAINMENT OF THE SHORT-TERM OBJECTIVE--TASK ANALYSIS.

2. DECIDE HOW TO TEACH THE SKILL.

3. SELECT TEACHING MATERIALS APPROPRIATE TO SHORT-TERM OBJECTIVES.

4. IDENTIFY AN APPROPRIATE MONITORING SYSTEM FOR EACH SHORT-TERM OBJECTIVE.

5. ADMINISTER INITIAL ASSESSMENT SKILL PROBES TO DETERMINE WHICH SKILLS IN THE SEQUENCE THE STUDENT ALREADY HAS.

6. USING THE MATERIALS SELECTED, PROVIDE DIRECT INSTRUCTION AT THE FIRST SEQUENCE STEP IN WHICH THE CHILD DOES NOT DEMONSTRATE PROFICIENCY.

7. ASSESS SKILLS TAUGHT BY USING CONTINUOUS MEASUREMENT.

8. IMPLEMENT DATA COLLECTION PROCEDURES AND MONITOR PROGRESS.

9. IF MASTERY OCCURS, PROCEED TO NEXT STEP IN PROGRAM SEQUENCE; IF NOT, MODIFY THE TASK, TEACHING MATERIALS, OR STRATEGIES AND RETEACH.

IMPLEMENTING THE IEP:
OVERVIEW OF STEPS

OBJECTIVES: Once participants have completed this module they will be able to:

--complete a simple task analysis

--define learner characteristics for a student in their class

--make an evaluation as to the appropriateness of the materials used with the above student

--specify measurable criteria for short term objectives

--demonstrate selected techniques involved in direct instruction

--complete a checklist with missing steps to implementing the IEP

--state why a particular sequence is inappropriate for a handicapped learner

--revise an instructional sequence to make it appropriate for a handicapped learner

--determine appropriate materials for a student with particular learning characteristics

--write one short term objective from a long term goal

--suggest procedures to modify an instructional program

INSTRUCTIONAL SEQUENCE USING TASK ANALYSIS

TERMINAL OBJECTIVE: STUDENT WILL WRITE LETTERS OF THE ALPHABET CORRECTLY AT THE RATE OF 50/MINUTE, 0 ERRORS, WITHIN TWO WEEKS.

ENTRY SKILLS:
CAN HOLD A PENCIL
CAN MAKE A CIRCLE
CAN DRAW A STRAIGHT LINE

INITIAL OBJECTIVE: GIVEN A LETTER SERIES ON PAPER, THE STUDENT CAN TRACE THE LETTERS AT A RATE OF 4/MINUTE, 2 ERRORS, WITHIN 5 DAYS.

ENABLING OBJECTIVES:

GIVEN A SET OF LETTERS WITH FACED CUES, THE STUDENT WILL TRACE OVER THE CUES AT A RATE OF 10 /MINUTE, 2 ERRORS, IN TWO DAYS.

GIVEN A MODEL OF LETTERS, THE STUDENT WILL WRITE THE LETTERS AT A RATE OF 20 /MINUTE, 2 ERRORS, WITHIN FIVE DAYS.

GIVEN ORAL DIRECTIONS, THE STUDENT WILL WRITE KNOWN LETTERS AT A RATE OF 50 /MINUTE, 0 ERRORS.

GIVEN DIRECTIONS TO WRITE A SPECIFIC LETTER, THE STUDENT WILL WRITE THE CORRECT LETTER WITHIN 1 SECOND OF COMMAND.
(ANALOGOUS)

GIVEN DIRECTION TO WRITE LETTERS OF THE ALPHABET, THE STUDENT WILL WRITE THE LETTERS CORRECTLY AT THE RATE OF 50 /MINUTE, 0 ERRORS.
(EQUIVALENT)

REINFORCEMENT: A CHART WILL BE DEVISED SO THAT WHEN STUDENT MEETS DAILY CRITERION, A STAR CAN BE PLACED ON THE CHART.

SAMPLE TASK ANALYSIS

Terminal Goal: Given verbal directions, pupil will wash hands independently.

Entry Behaviors: Grasp motion
Turn motion
Concept of wet and dry
Concept of water

Steps Involved:

1) Come to the sink
2) Turn on the water
3) Put hands in the water
4) Pick up the soap
5) Rub the soap on the hands
6) Put down the soap
7) Rub hands together
8) Rinse hands under water
9) Turn off the water
10) Pick up the towel
11) Dry hands
12) Put down the towel

DESIGNING TEACHER-MADE MATERIALS

1. WHAT WILL THE MATERIAL BE DESIGNED TO TEACH?
2. IS THE OBJECTIVE OF THE MATERIAL TO PROVIDE DRILL AND PRACTICE OR TO REVIEW AND TEST?
3. WHAT MUST THE LEARNER ALREADY KNOW OR BE ABLE TO DO IN ORDER TO USE THE MATERIAL?
4. WILL THE MATERIAL MOTIVATE THE CHILD?
5. WILL IT ACTIVELY INVOLVE THE LEARNER?
6. WILL IT GIVE HIM FEEDBACK ABOUT HIS SUCCESS OR FAILURE?

Placement test for Patterns, Sounds and Words:

DIRECTIONS: Have the child read across the page. As the child reads orally, record the oral responses. After the test has been completed, calculate the errors. If the child misses five consecutive words, terminate the subtest and move on to the next subtest.

SUBTEST 1: Short vowels

yam	kid	cot	yet	nun
tax	fin	hop	wet	mud
rap	hid	lot	bet	mum
ram	lip	mob	hem	bun
map	rid	rot	led	sub

ANALYSIS

	Correct	Error
a(5)		
i(5)		
o(5)		
e(5)		
u(5)		

SUBTEST 2: CVCC with ll, ss, nk, sk, nd, ng, nt, st, and mp.

bask	ding	moss	best	lung
camp	fill	bond	bent	hunk
mass	risk	pond	jest	bunk
land	wing	romp	sent	bump
rant	mill	lost	less	dusk
sank	kill			

	Correct	Error
ll(3)		
ss(3)		
nk(3)		
sk(3)		
nd(3)		
ng(3)		
nt(3)		
st(3)		
mp(3)		

SUBTEST 3: CVCe with a, o, i and u.

babe	zone	bike	cube
fate	yoke	mine	cute
gate	lone	pipe	duke
lane	coke	side	dune
hate	hole	wipe	fuse

	Correct	Error
CVCe with a(5)		
CVCe with o(5)		
CVCe with i(5)		
CVCe with u(5)		

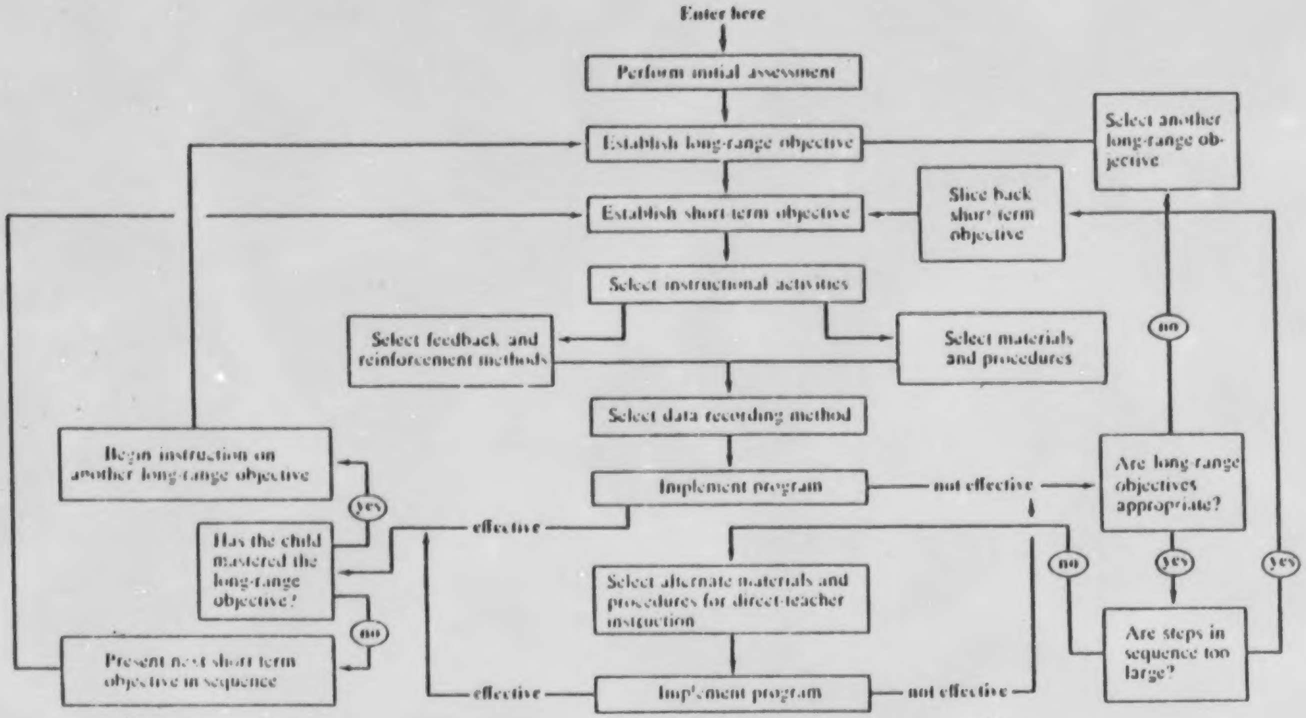

Enter here
Perform initial assessment
Establish long-range objective
Select another long-range objective
Establish short term objective
Slice back short term objective
Select instructional activities
Select feedback and reinforcement methods
Select materials and procedures
no
Select data recording method
Begin instruction on another long-range objective
Implement program
not effective
Are long-range objectives appropriate?
yes
effective
Has the child mastered the long-range objective?
Select alternate materials and procedures for direct-teacher instruction
no
yes
yes
Are steps in sequence too large?
no
Present next short term objective in sequence
effective
Implement program
not effective

FIGURE 6. *Program Modifications When Program Is Ineffective During the Acquisition Stage*

Lowenbrau & Affleck. Teaching Mildly Handicapped Children in Regular Classes. Charles E. Merrill Publishing Co., Columbus: 1976, p. 88. (Reprinted with permission of Merrill Publishing Co.)

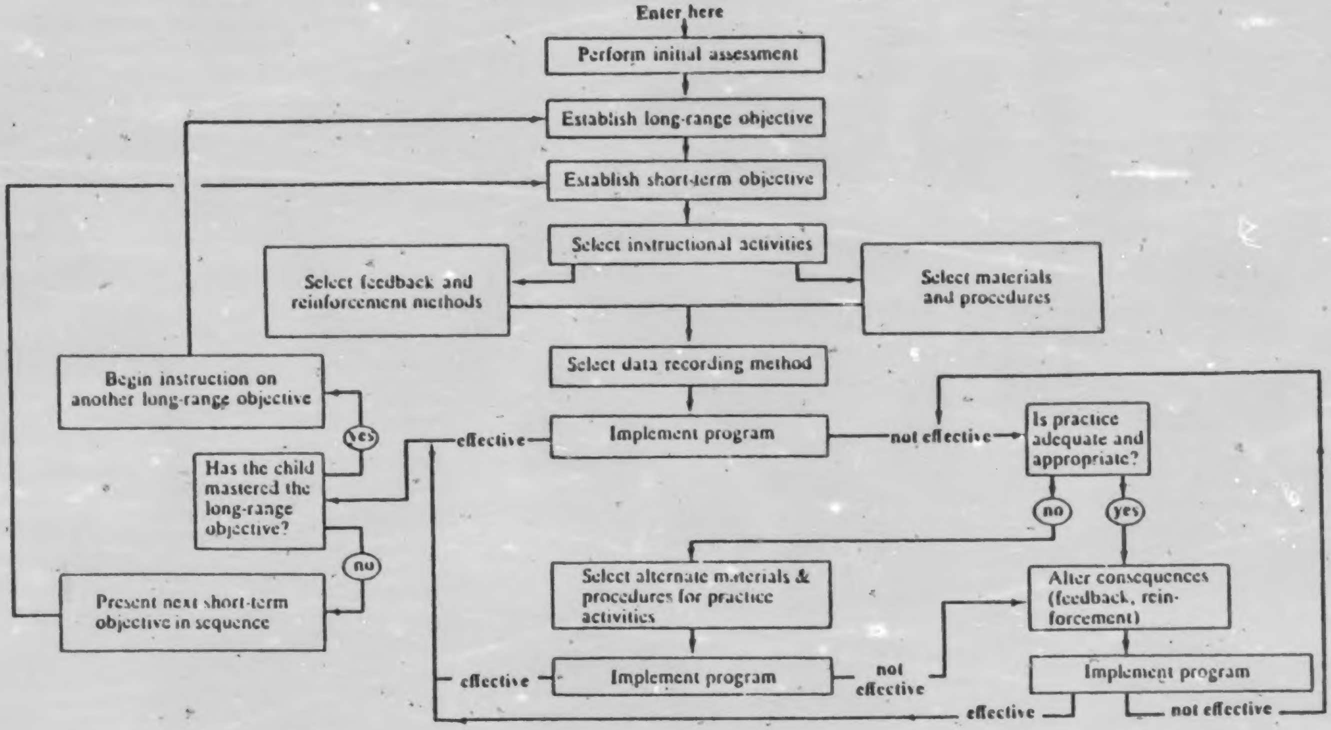

Enter here
Perform initial assessment
Establish long-range objective
Establish short-term objective
Select instructional activities
Select feedback and reinforcement methods
Select materials and procedures
Select data recording method
Begin instruction on another long-range objective
yes
Has the child mastered the long-range objective?
no
Present next short-term objective in sequence
effective
Implement program
not effective
Is practice adequate and appropriate?
no
yes
Select alternate materials & procedures for practice activities
Alter consequences (feedback, reinforcement)
effective
Implement program
not effective
Implement program
effective
not effective

FIGURE 7. *Program Modifications When Program Is Ineffective during the Proficiency Stage* [25]

Lowenbraun & Affleck. Teaching Mildly Handicapped Children in Regular Classes. Charles E. Merrill Publishing Co., Columbus: 1976, p. 91. (Reprinted with permission of Merrill Publishing Co.)

IMPLEMENTING THE IEP:
DETERMINING WHAT TO TEACH

INTRODUCTION

Definition:	Those sequential procedures and activities which must be followed in order to provide the student with the most appropriate experiences to meet the goals as specified in his/her Individual Educational Program (IEP). It is important to clarify that these procedures outline the Individual Instruction Plan (IIP). This training module specifies what and how the teacher will teach the student and evaluate the student's progress.
Rationale:	The most critical step in the IEP process is the manner in which the professional teacher chooses to provide instruction to meet the annual goals and short-term objectives specified in the IEP. If this step is not governed by the most current and functional teaching techniques available in the profession, then all energy, time, and professional involvement to this point have been wasted.
Special Instructions:	There are six components which comprise this Module: Overview of Steps to Implementing the IEP; Determining What To Teach; Selecting and Matching Materials for Teaching; Determining How to Teach Skills; Providing a Conducive Environment; Now You Have It, How Do You Use It? The first component, the Overview, is designed to be presented apart from the other five. It parallels the information and sequence found in the remaining components, but at an "awareness" level. There is no separate text for the Overview, so it is recommended that the trainer carefully review

INTRODUCTION (cont.)

the other components and use the outline provided when presenting the material. It would be appropriate to use the Overview when the intent of training is to develop an awareness of the IEP implementation process and not to build skills. The other five components provide in-depth study and practice in how to appropriately implement IEPs.

Trainers should be aware, and should make it clear to participants, that this module is somewhat different from the other modules in the training package. In many instances, participants are asked to read information and apply what they have learned to a situation or task. Therefore, there is less reliance on the trainer teaching every concept and skill and more is expected of the participants themselves. Because of the nature of the information and its application to the classroom, this approach was determined as the most appropriate method for teaching the skills.

Trainers will need to provide copies of Instructional Materials for the Mildly Handicapped by Anita Archer when conducting this module. Copies are available from the NWRRC for $3.30 or you may reproduce them yourself.

USAGE SUMMARY

Purpose: To familiarize participants with skills needed to determine where to begin the implementation of the IEP.

Objectives: At the completion of this component, participants will be able to:

- --perform a simple task analysis
- --identify appropriate measurement systems for instructional objectives
- --translate instructional sequence steps into instructional objectives
- --write informal assessment items for an instructional sequence

Materials:

Handouts 1-8
Transparencies 1-12

Aids: Overhead projector, screen, transparency pen, chalkboard, chalk

Presentation Format: Large group presentation and small group tasks (2 people per group)

Time: 2½ hours

PRESENTATION OUTLINE

I. The relationship between the IEP and the IIP

II. Two ways to obtain an instructional sequence
  A. Generate one
  B. Extract one

III. Task analytic approach to developing an instructional sequence
  A. Components of task analysis
  B. Steps in doing a task analysis
  C. Activities using task analysis

IV. Use of commercial materials to develop an instructional sequence
  A. Sample sequences
  B. Pitfalls of commercial sequences

V. Developing instructional objectives from learning sequence

VI. Establishing a monitoring system
  A. Rationale for data collection
  B. Identifying appropriate measurement systems

VII. Writing appropriate instructional objectives

VIII. Informal assessment or determining where to start

SCRIPT TEXT

THE PURPOSE OF THIS COMPONENT IS TO ACQUAINT YOU WITH THE PROCESS OF DEFINING AND DEVELOPING AN INDIVIDUALIZED INSTRUCTIONAL PLAN (IIP). UPON COMPLETION OF THE TRAINING, IT IS ANTICIPATED THAT YOU WILL BE ABLE TO ACCOMPLISH THE FOLLOWING OBJECTIVES:

SHOW TRANSPARENCY 1 (T-1)

READ OBJECTIVES

ARE THERE ANY OTHER OBJECTIVES YOU WOULD LIKE TO ADD TO THESE?

LIST ANY ADDITIONAL OBJECTIVES ON TRANSPARENCY

ONCE THE IEP HAS BEEN DEVELOPED BY THE CHILD STUDY COMMITTEE, IT IS THE RESPONSIBILITY OF THE IMPLEMENTER TO DETERMINE THE INSTRUCTIONAL OBJECTIVES THAT WILL TAKE THE STUDENT FROM WHERE HE OR SHE IS TO THE GOALS WHICH ARE STATED IN THE IEP. ACTUALLY, THEN THE IMPLEMENTER DEVELOPS A LESSON PLAN, SOMETIMES CALLED AN IIP, OR INDIVIDUALIZED INSTRUCTIONAL PLAN, WHICH CLEARLY SPECIFIES EXACTLY WHAT THE STUDENT'S EXPECTED PERFORMANCE IS TO BE, TECHNIQUES AND MATERIALS TO BE USED IN THE TEACHING OF THESE OBJECTIVES, AND THE SPECIFIC CRITERIA TO DETERMINE WHEN THE STUDENT HAS ACHIEVED MASTERY.

THIS TRANSPARENCY SHOWS THE RELATIONSHIP BETWEEN THE IEP AND THE TASKS WHICH MUST BE DONE BY THE IMPLEMENTER IN ORDER TO DEVELOP AN IIP.

SHOW TRANSPARENCY 2 (T-2)

THE TEACHER USES THE GOALS AND OBJECTIVES AS STATED ON THE IEP TO BUILD THE TEACHING SEQUENCE FOR THE INDIVIDUAL CHILD. A SEQUENCE IS A LIST OF TEACHING-LEARNING STEPS THAT LEAD TO THE DESIRED SHORT TERM OBJECTIVE. THE IIP THEN, CONSISTS OF THESE STEPS IN ADDITION TO THE TECHNIQUES AND MATERIALS USED TO FACILITATE THE STUDENT'S LEARNING OF THESE STEPS. IT IS IMPORTANT TO NOTE THAT THE IIP IS NOT REQUIRED BY STATE OR FEDERAL LAW. HOWEVER, IT IS FELT THAT A GOOD TEACHER MUST HAVE SOME KIND OF WRITTEN PLAN TO GUIDE THE EDUCATIONAL EXPERIENCES OF THE STUDENT. A WELL-DEVELOPED IIP WILL PROVIDE RELEVANT AND USEFUL INFORMATION FOR EVALUATING STUDENT PROGRESS AND FOR THE ANNUAL REVIEW, AS WELL AS THE DOCUMENTATION NEEDED FOR ACCOUNTABILITY.

SHOW TRANSPARENCY 3 (T-3)

THIS IS A SAMPLE FORMAT FOR THE IIP. THIS FORMAT ALLOWS FOR EACH GOAL STATED ON THE IEP TO BE TRANSLATED INTO OBJECTIVES WITH MATERIALS AND TECHNIQUES. IT ALSO ALLOWS FOR DATA

COLLECTION REGARDING MASTERY. USING THIS FORMAT, A PAGE WOULD BE FILLED OUT FOR EACH GOAL.

THERE ARE BASICALLY TWO WAYS OF ARRIVING AT AN INSTRUCTIONAL SEQUENCE:

(1) TO GENERATE YOUR OWN

(2) TO EXTRACT A SEQUENCE FROM EXISTING MATERIAL.

LET'S FIRST REVIEW ONE METHOD OF GENERATING YOUR OWN SEQUENCE. THAT METHOD IS TASK ANALYSIS.

TASK ANALYSIS IS DEFINED AS THE PROCESS OF ISOLATING, DESCRIBING, AND SEQUENCING ALL ESSENTIAL STEPS OF A SPECIFIED TASK. COMPONENTS OF THE TASK ANALYSIS INCLUDE:

(1) TERMINAL OBJECTIVE--WHAT YOU WANT THE STUDENT TO BE ABLE TO DO

(2) ENTRY SKILLS OF THE LEARNER

(3) ENABLING OBJECTIVES--SEQUENTIAL STEPS TO GET THE LEARNER TO THE TERMINAL OBJECTIVE

(4) INITIAL OBJECTIVE BASED ON THE ENTRY SKILLS OF THE LEARNER

(5) SPECIFIC TECHNIQUES TO BE USED IN TEACHING

(6) REINFORCEMENT TECHNIQUES

IN ORDER TO DO A TASK ANALYSIS WE WOULD FOLLOW THE STEPS LISTED ON THIS HANDOUT. YOU MAY WANT TO MAKE SOME NOTES ON THE HANDOUT AS I DISCUSS EACH POINT.

PASS OUT HANDOUT 1 (H-1)

IMPLEMENTING THE IEP:
DETERMINING WHAT TO TEACH

STEP 1 - IDENTIFY TERMINAL BEHAVIOR

WHAT IS THE GOAL OF THE SEQUENCE? WHAT IS IT YOU WANT THE CHILD TO BE ABLE TO DO WHEN SHE/HE GETS THROUGH WITH THE SERIES OF TASKS? FOR EXAMPLE, THE TERMINAL GOAL OF ONE INSTRUCTIONAL SEQUENCE MIGHT BE "WHEN SHOWN COLORED BLOCKS, THE CHILD WILL BE ABLE TO CORRECTLY NAME SIX COLORS." ANOTHER TERMINAL GOAL MIGHT BE, "WHEN VERBALLY DIRECTED BY THE TEACHER, FRED WILL WRITE THE CAPITAL LETTER "A" WITH 100% ACCURACY OVER FIVE CONSECUTIVE TRIALS."

STEP 2 - SPECIFY ENTRY BEHAVIORS

THIS IS OFTEN A DIFFICULT TASK. IN ORDER TO DETERMINE WHETHER IT IS REALISTIC TO EXPECT A STUDENT TO ACCOMPLISH THE TASK, YOU MUST LIST THE ENTRY BEHAVIORS. THE LIST SHOULD INCLUDE ALL OF THE SKILLS A CHILD MUST HAVE IN ORDER TO BEGIN THE PROGRAM. FOR EXAMPLE, IF WE WERE GOING TO TEACH A CHILD TO TELL TIME, WE WOULD NEED TO ASK WHAT ARE ALL OF THE THINGS A CHILD NEEDS TO KNOW BEFORE HE/SHE LEARNS TO TELL TIME? THE ENTRY BEHAVIORS WOULD INCLUDE:

1. RECOGNIZE NUMBERS FROM 1 TO 59
2. ROTE COUNT FROM 1 TO 59
3. COUNT BY 5'S TO 55
4. COUNT BY 10'S TO 60
5. DISCRIMINATE BETWEEN THE SIZE OF HANDS OF CLOCK.

STEP 3 - LIST THE STEPS LEADING TO THE TERMINAL BEHAVIOR

NOW THAT YOU HAVE PINPOINTED THE TERMINAL BEHAVIOR AND IDENTIFIED THE ENTRY BEHAVIORS, YOU MUST FIGURE OUT ALL OF THE STEPS LEADING TO THE TERMINAL BEHAVIOR. THE STEPS ARE SOMETIMES REFERRED TO AS ENABLING OBJECTIVES. THERE ARE TWO APPROACHES THAT CAN BE USED TO ARRIVE AT THE STEPS:

1. SHOTGUN METHOD: WRITE DOWN ALL THE ELEMENTS YOU THINK WOULD BE COVERED UNDER A SPECIFIC SKILL AREA. THIS CAN BE DONE WHEN BRAINSTORMING WITH ANOTHER PERSON.

   EXAMPLE: SHORT VOWELS - A, I, E, O, U.
   COLORS - RED, BLUE, GREEN, YELLOW, PURPLE, BROWN, BLACK, WHITE.
   PUNCTUATION - PERIOD, QUESTION MARK, EXCLAMATION POINT, COMMAS, QUOTATION MARKS.

2. RESEARCH METHOD: LOOK AT ESTABLISHED MATERIALS TO DETERMINE ELEMENTS OFTEN DEFINED UNDER A SPECIFIC SKILL AREA.

STEP 4 - SEQUENCE THE STEPS IN THE ORDER IN WHICH THEY WILL BE TAUGHT

ONCE THE STEPS HAVE BEEN DETERMINED, WE WILL NEED TO DECIDE THE ORDER IN WHICH THE STEPS WILL BE TAUGHT. HERE ARE A FEW RULES OF THUMB TO ASSIST YOU IN ORDERING THE STEPS.

1. BEGIN WITH THE LEAST COMPLEX AND MOVE TO THE MOST COMPLEX.
2. BEGIN WITH THE MOST FREQUENTLY USED SKILLS AND MOVE TO THE LEAST FREQUENTLY USED (E.G., DECODING CVC WORDS WITH SHORT VOWELS TO DECODING CVC WORDS WITH SILENT DOUBLE CONSONANTS, I.E., W, R)
3. IF DISCRIMINATION BETWEEN THE ELEMENTS IS DIFFICULT, SEPARATE THEM IN THE TEACHING SEQUENCE (E.G., B FROM D, Y̌ FROM Ě)
4. IF THERE IS SOME SIMILARITY BETWEEN ELEMENTS THAT WOULD ASSIST IN LEARNING, GROUP THOSE ELEMENTS TOGETHER (E.G., SHORT VOWELS ARE TAUGHT IN CLOSE PROXIMITY)
5. INCLUDE PERIODIC REVIEW

SHOW TRANSPARENCY 4 (T-4)

YOU CAN SEE ON THIS TRANSPARENCY A COMPLETE SEQUENCE FOR WRITING THE ALPHABET. NOTE THAT THE OBJECTIVES ARE ALL STATED IN BEHAVIORAL TERMS.

ARE THERE ANY QUESTIONS ABOUT THE MATERIAL PRESENTED UP TO THIS POINT?

RESPOND TO PARTICIPANTS' QUESTIONS.

WE WILL NOW ATTEMPT A TASK ANALYSIS OF OUR OWN. WE WILL DO IT IN TWO WAYS. FIRST, I WILL GIVE YOU A SHORT TASK WHICH INVOLVES FIRST SPECIFYING ENTRY BEHAVIOR AND THEN ARRANGING THE SEQUENCE STEPS IN THE ORDER IN WHICH THEY OCCUR.

THE 2ND STEP WILL INVOLVE DETERMINING THE TEACHING SEQUENCE IN ENABLING OBJECTIVES TO HELP THE LEARNER REACH THE TERMINAL OBJECTIVE.

IN ORDER TO DO THESE TASKS YOU WILL NEED TO PAIR UP WITH ONE OTHER PERSON.

ON THE NEXT HANDOUT WRITE THE ENTRY CRITERIA AND THEN DETERMINE THE CORRECT ORDER IN WHICH THE STEPS SHOULD OCCUR. YOU HAVE 10 MINUTES FOR THIS TASK.

DIRECT PARTICIPANTS TO FORM PAIRS

PASS OUT HANDOUT 2 (H-2)

AFTER 10 MINUTES ASK ONE PARTICIPANT TO GIVE HIS/HER SEQUENCE.

____________________, CAN YOU GIVE US THE CORRECT
PARTICIPANT'S NAME
SEQUENCE?

LIST PARTICIPANT'S RESPONSES ON THE CHALK BOARD.

LET'S SEE IF THE SEQUENCE IS CORRECT.

SHOW TRANSPARENCY 5 (T-5)

GIVE PARTICIPANTS FEEDBACK ON THEIR RESPONSE.

THE NEXT TASK IS FOR YOU TO DETERMINE THE SEQUENCE OF STEPS NEEDED TO OBTAIN A TERMINAL OBJECTIVE. YOU WILL AGAIN WORK IN GROUPS. USING THIS HANDOUT, DERIVE THE SEQUENCE. THE FIRST TWO STEPS ARE DONE FOR YOU. BE SURE TO ALLOW FOR PERIODIC REVIEW. YOU HAVE 10 MINUTES FOR THIS TASK.

PASS OUT HANDOUT 3 (H-3)

AFTER 10 MINUTES, ASK ONE PARTICIPANT TO GIVE HIS/HER SEQUENCE.

______________________, CAN YOU GIVE US THE CORRECT SEQUENCE?
PARTICIPANT'S NAME

LIST PARTICIPANT'S RESPONSES ON THE CHALKBOARD.

LET'S SEE IF THE SEQUENCE IS CORRECT.

SHOW TRANSPARENCY 6 (T-6)

GIVE PARTICIPANTS FEEDBACK ON THEIR RESPONSES.

THIS SEQUENCE CONTAINS SEVERAL STEPS WHICH YOU MAY NOT HAVE INCLUDED IN YOUR TASK ANALYSIS. NOTE THAT STEPS WERE INCLUDED FOR REVIEW OF MATERIAL WHICH HAD BEEN PREVIOUSLY LEARNED AT THE SAME TIME NEW MATERIAL WAS INTRODUCED. THIS TASK ANALYSIS DEMONSTRATES GOOD TEACHING PROCEDURES.

NOW THAT YOU'VE HAD SOME EXPERIENCE IN DOING A TASK ANALYSIS, LET'S TASK ANALYZE THIS GOAL FOR HECTOR.

SHOW TRANSPARENCY 7 (T-7)

WE WILL START BY DETERMINING THE TEACHING SEQUENCE.

THE GOAL IS FOR HECTOR TO DECODE CONSONANT, VOWEL CONSONANT LONG "E" WORDS WITH 100% ACCURACY. HE IS ABLE TO DISCRIMINATE THE SOUND OF BEGINNING AND ENDING CONSONANTS T, D, S, P, M.

WHAT SHOULD THE FIRST STEP IN THE SEQUENCE BE?

WAIT FOR RESPONSE.

IF NO RESPONSE, WRITE FIRST STEP ON THE TRANSPARENCY - 'DECODES CVC WORDS WITH SHORT A'

ELICIT RESPONSES FROM PARTICIPANTS OR PROMPT UNTIL THE FOLLOWING SEQUENCE IS OBTAINED:

DECODES CVC WORDS WITH SHORT I
DECODES CVC WORDS WITH SHORT O
DECODES CVC WORDS WITH SHORT E
DECODES CVC WORDS WITH SHORT U
DECODES CVC WORDS WITH ALL VOWELS
DECODES CVCE WORDS WITH SHORT A
DECODES CVCE WORDS WITH SHORT I
DECODES CVCE WORDS WITH SHORT O
DECODES CVCE WORDS WITH SHORT E
DECODES CVCE WORDS WITH SHORT U
DECODES CVCE WORDS WITH ALL VOWELS

AT THIS POINT NO OBJECTIVES ARE WRITTEN.

YOU CAN SEE THAT THE PROCESS OF DOING A TASK ANALYSIS FOR EACH OBJECTIVE CAN BE QUITE TIME CONSUMING. THIS IS TRUE REGARDLESS OF THE PARTICULAR IMPLEMENTER'S EXPERTISE. HOWEVER, THERE ARE ALTERNATIVES WHICH MIGHT EXPEDITE THE PROCESS.

FOR INSTANCE, COMMERCIAL PUBLISHERS SOMETIMES PUBLISH SEQUENCES AND/OR HIERARCHIES THAT CAN BE PURCHASED. OTHER ALTERNATIVES INCLUDE:

(1) SCHOOL CURRICULUM GUIDES
(2) SCOPE AND SEQUENCE CHARTS
(3) DEVELOPMENTAL SEQUENCES

HERE ARE SOME SAMPLE SEQUENCES.

PASS OUT HANDOUT 4 (H-4-17)

IF YOU USE COMMERCIALLY AVAILABLE SEQUENCES BE AWARE THAT ALTHOUGH THEY SEEM TO BE LIFE SAVERS AND TIME SAVERS THEY CANNOT BE USED WITHOUT SOME ADAPTATION FOR THE HANDICAPPED LEARNER. OFTEN SEQUENCES FOUND IN COMMERCIAL MATERIALS HAVE "GAPS" BETWEEN THE STEPS, OR THEY USE VERY LARGE STEPS. THOUGH MANY CHILDREN IN THE REGULAR CLASSROOM MAY BE ABLE TO HANDLE A GREAT DEAL OF INFORMATION AT ONE TIME, MANY HANDICAPPED CHILDREN NEED INSTRUCTION WHICH IS SLICED BACK INTO SMALLER STEPS.

FOR EXAMPLE, THIS SEQUENCE WAS TAKEN FROM A MATH SERIES.

SHOW TRANSPARENCY 8 (T-8)

GO OVER SEQUENCE.

SOLVES ADDITION PROBLEMS
2 DIGIT + 2 DIGIT WITH REGROUPING
SOLVES ADDITION PROBLEMS
3 DIGIT + 3 DIGIT WITH REGROUPING
SOLVES ADDITION PROBLEMS
4 DIGIT + 4 DIGIT WITH REGROUPING

YOU CAN SEE THAT THESE STEPS ARE MUCH TOO LARGE FOR THE HANDICAPPED LEARNER. THE STEPS WOULD HAVE TO BE BROKEN DOWN INTO SMALLER PIECES IF A HANDICAPPED LEARNER WERE TO BE TAUGHT THIS SEQUENCE.

ANOTHER CAUTION ABOUT COMMERCIAL SEQUENCES IS THAT THEY DO NOT REPLACE GOOD INSTRUCTIONAL OBJECTIVES, WHICH SHOULD INCLUDE PRECISE STATEMENTS OF THE BEHAVIOR TO BE PERFORMED, THE CONDITIONS UNDER WHICH THE BEHAVIOR SHOULD OCCUR, AND THE CRITERIA FOR SPECIFYING THE LEVEL OF ACCEPTABLE PERFORMANCE.

SO, ONCE THE LEARNING SEQUENCE OR ENABLING OBJECTIVES HAVE BEEN IDENTIFIED, THE NEXT STEP IS TO TRANSLATE THE STEPS INTO SHORT TERM OBJECTIVES. REMEMBER THAT SHORT TERM OBJECTIVES CONTAIN THE FOLLOWING ELEMENTS:

THE LEARNER
THE OBSERVABLE BEHAVIOR
THE CONDITIONS
THE STANDARD OR CRITERION.

IF WE WERE TO MAKE ONE OF SHAUN'S SEQUENCE STEPS INTO A SHORT TERM OBJECTIVE WE WOULD HAVE: "WHEN PRESENTED WITH FLASH CARDS CONTAINING ADDITION FACTS WITH SUMS TO 6, 7, 8, SHAUN WILL SAY THE SUM WITH 100% ACCURACY OVER 10 TRIALS."

EVEN THOUGH THE PROCESS OF WRITING THE SHORT TERM OBJECTIVE APPEARS QUITE EASY, IT IS IMPORTANT THAT CRITERIA FOR ACCEPTABLE PERFORMANCE BE DETERMINED FOR EACH OBJECTIVE.

ALTHOUGH EACH OBJECTIVE WILL HAVE ITS OWN UNIQUE FACTORS AFFECTING HOW LONG IT WILL TAKE FOR COMPLETION, WITHOUT PROPER TIME LINES AND SPECIFIC MEASURING SYSTEMS FOR DATA COLLECTION STATED IN THE OBJECTIVES, EVALUATION WILL NOT BE EASY. IT WILL BE DIFFICULT TO DETERMINE WHETHER THE LEARNER HAS MASTERED THE SKILL. IMPLEMENTERS NEED TO KNOW HOW TO DESIGN AN APPROPRIATE SYSTEM FOR MONITORING PERFORMANCE.

THE DESIGN OF AN APPROPRIATE MONITORING SYSTEM INVOLVES SELECTING A PROCEDURE THAT BEST REFLECTS THE BEHAVIOR TO BE MONITORED.

DATA ARE COLLECTED TO PROVIDE THE TEACHER WITH INFORMATION NECESSARY TO:

(1) MAKE DECISIONS REGARDING PUPIL PROGRESS BASED ON DIRECT AND DAILY MEASUREMENT
(2) EVALUATE EFFECTIVENESS OF ENVIRONMENTAL, INSTRUCTIONAL, AND REINFORCEMENT MODIFICATIONS
(3) PINPOINT OTHER ACADEMIC AND SOCIAL BEHAVIOR WHICH NEEDS TO BE MODIFIED
(4) DETERMINE IF THE INTERVENTION IS WORKING
(5) PROVIDE ACCOUNTABILITY

SOME MEASUREMENT SYSTEMS ARE MORE APPROPRIATE AT CERTAIN STAGES OF LEARNING THAN OTHERS. FOR THE ACQUISITION OF A SKILL, ACCURACY OF RESPONSE IS THE KEY DETERMINANT OF THE MEASUREMENT SYSTEM. SUCH SHORT-TERM OBJECTIVES AS "TO READ 20

SIGHT WORDS CORRECTLY" OR "TO SPELL 25 WORDS FROM A WORD LIST" SHOULD BE MEASURED WITH PERCENTAGES. PERCENT DATA MAY BE TAKEN ON BOTH THE NUMBER OF CORRECT RESPONSES AND THE NUMBER OF ERROR RESPONSES.

ALTHOUGH PERCENT DATA INDICATES ACCURACY OF A PUPIL'S PERFORMANCE, THEY DO NOT SHOW CHANGES IN SPEED. A MORE APPROPRIATE MEASURE OF CHANGES IN SPEED IS RATE DATA. RATE DATA ARE BEST TAKEN WHEN MEASURING SKILLS DURING THE PROFICIENCY STAGE OF LEARNING. THE PROFICIENCY STAGE OF LEARNING OCCURS WHEN THE CHILD IMPROVES HIS/HER ACCURACY AND RATE OF PERFORMANCE.

FOR EXAMPLE, IF THE GOAL IS "TO SORT 20 PEGS WITH ZERO ERRORS PER MINUTE" OR "TO READ ORALLY, 80 WORDS PER MINUTE, ZERO ERRORS," MEASURES OF RATE SHOULD BE TAKEN. RATES CAN BE TAKEN ON BOTH CORRECT AND ERROR RESPONSES.

FOR SOME BEHAVIORS, IT IS NECESSARY TO KNOW HOW LONG THEY LAST, SO A MEASURE OF DURATION IS NEEDED. THE GOAL MAY BE "TO INCREASE THE AMOUNT OF TIME JOHN SPENDS PLAYING WITH OTHER CHILDREN."

WHAT THE TEACHER NEEDS TO KNOW IS THE NUMBER OF TIMES THE BEHAVIOR WAS RECORDED AND THE AMOUNT OF THE TIME THAT JOHN WAS ACTUALLY ENGAGED IN THE BEHAVIOR BEING MEASURED.

SHOW TRANSPARENCY 9 (T-9)

THIS TRANSPARENCY ILLUSTRATES SOME OBJECTIVES WHICH ARE APPROPRIATE FOR THE KIND OF DATA TO BE COLLECTED.

THE HANDOUT WHICH I WILL NOW PROVIDE SUMMARIZES GUIDELINES FOR CHOOSING APPROPRIATE MONITORING SYSTEMS FOR THE KIND OF DATA TO BE SELECTED.

PASS OUT HANDOUT 5 (H-18)

THE NEXT HANDOUT PRESENTS MEASUREMENT CRITERIA WHICH WOULD BE APPROPRIATE TO SPECIFIC GOAL AREAS (E.G., CLASSROOM BEHAVIOR, SELF-HELP SKILLS, ETC.)

PASS OUT HANDOUT 6 (H-19)

NOW THAT YOU HAVE AN IDEA AS TO AN APPROPRIATE MEASUREMENT SYSTEM LET'S WRITE SOME OBJECTIVES FOR THE SEQUENCE STEPS FROM HECTOR'S IIP. WE WILL NEED TO INCLUDE ALL OF THE NECESSARY ELEMENTS: LEARNER OBSERVABLE BEHAVIOR, CONDITIONS AND CRITERIA.

LET'S BEGIN WITH THE FIRST SEQUENCE STEP, "DECODE CVC WORDS WITH SHORT A."

LET'S SPECIFY THE CONDITIONS FIRST, "WHEN SHOWN FLASH CARDS WITH CVC WORDS, SHORT A, HECTOR WILL ORALLY READ EACH WORD WITH..."

WHAT IS OUR MEASUREMENT CRITERIA?

FOR THIS OBJECTIVE DO WE WANT ACCURACY OR RATE?

WE WANT ACCURACY HERE BECAUSE HE IS JUST LEARNING THE SKILL.

SO OUR OBJECTIVE WILL BE: "WHEN SHOWN FLASH CARDS WITH CVC WORDS, SHORT A, HECTOR WILL ORALLY READ EACH WORD WITH 100% ACCURACY."

WRITE THE COMPLETE OBJECTIVE ON THE TRANSPARENCY.

THE PRESENTER SHOULD THEN GUIDE THE WRITING OF AN APPROPRIATE INSTRUCTIONAL OBJECTIVE BASED ON THE TEACHING SEQUENCE WHICH WAS DEVELOPED PREVIOUSLY.

OBVIOUSLY, WHEN YOU DO THIS TASK AS THE IMPLEMENTER, YOU CAN DO THE SEQUENCING AND OBJECTIVE WRITING TOGETHER ON THE IIP SHEET OR THE LESSON PLAN SHEET.

LOOK AT THIS EXAMPLE FROM HECTOR'S IIP.

SHOW TRANSPARENCY 10 (T-10)

HERE ARE SOME OF THE SEQUENCE STEPS WHICH HAVE ALREADY BEEN PUT INTO SHORT TERM OBJECTIVES.

THE NEXT STEP IN THE IMPLEMENTATION PROCESS IS TO DETERMINE THE STARTING POINT FOR THE INSTRUCTION, I.E., AT WHAT POINT IN THE SEQUENCE YOUR STUDENT WILL BEGIN.

WHEN DETERMINING WHERE TO BEGIN THE INSTRUCTION ON A GIVEN TEACHING SEQUENCE OF STEPS TOWARD A SHORT-TERM OBJECTIVE, THE IMPLEMENTER WILL EITHER NEED TO CONSTRUCT AN INFORMAL

ASSESSMENT TOOL OR FIND ONE READY-MADE. USE OF AN INFORMAL ASSESSMENT DEVICE CAN ELIMINATE MUCH WASTED INSTRUCTIONAL TIME AND AT THE SAME TIME PREVENT UNDUE FRUSTRATION FOR THE CHILD. ARCHER (1977) SUGGESTS DEVELOPING AN INFORMAL TEST IN THE FOLLOWING MANNER:

> TO FORM AN INFORMAL PALCEMENT TEST, SIMPLY SELECT ITEMS THAT COULD BE USED TO MEASURE EACH SEQUENTIAL STEP. YOU MAY EITHER GENERATE THESE ITEMS OR SELECT THEM FROM THE MATERIAL AT THE APPROPRIATE JUNCTURES. IN ALL CASES, THE ITEMS USED IN TESTING SHOULD BE SIMILAR TO THOSE USED IN THE MATERIAL. THE TEST ITEMS SHOULD BE DIRECT MEASURES OF THE SKILLS IN THE SEQUENCE. FOR EXAMPLE, IF THE SEQUENCE INVOLVES DECODING OF WORDS WITH DIFFERENT PHONETIC ELEMENTS, THE MOST DIRECT MEASURE WOULD INVOLVE ORAL READING OF WORDS CONTAINING THOSE PHONETIC ELEMENTS. OTHER TESTING TECHNIQUES SUCH AS WRITING IN THE MISSING GRAPHEME (LETTER) WHEN A WORD IS ORALLY PRONOUNCED FOR THE CHILD MAY BE SO INDIRECT AS TO LEAD TO FAULTY INTERPRETATIONS AND INFERENCES. AFTER SELECTION OF ITEMS, ARRANGE THEM IN THE SAME ORDER AS THE INSTRUCTIONAL SEQUENCE. ADMINISTER THE ASSESSMENT TOOL TO THE CHILD AND DETERMINE AN APPROPRIATE STARTING PLACE.

TO SUMMARIZE, IN ORDER TO DEVELOP AN INFORMAL ASSESSMENT TOOL WE WOULD FOLLOW THESE STEPS:

SHOW TRANSPARENCY 11 (T-11)

THE FOLLOWING ASSESSMENT TOOL WAS DERIVED FROM A MATH SEQUENCE.

SHOW TRANSPARENCY 12 (T-12)

THE LAST TASK IN THIS TRAINING SESSION IS FOR YOU TO DEVELOP A SEQUENTIAL ASSESSMENT TOOL TO BE USED WITH THE INSTRUCTIONAL SEQUENCE FOR HECTOR.

THIS HANDOUT GIVES AN EXAMPLE OF AN ASSESSMENT TOOL FOR A READING TEXT. YOU MAY USE IT AS A GUIDE.

PASS OUT HANDOUT 7 (H-20)

DEVELOP YOUR ASSESSMENT ITEMS ON THIS HANDOUT. MAKE AT LEAST 3 ITEMS FOR EACH SEQUENCE STEP.

PASS OUT HANDOUT 8 (H-21)

YOU MAY WORK WITH ANOTHER PERSON TO DO THE TASK. YOU HAVE 20 MINUTES IN WHICH TO COMPLETE IT.

AFTER 20 MINUTES ASK SEVERAL PARTICIPANTS TO GIVE ITEMS FROM THEIR ASSESSMENT TOOL.

HANDOUT 1

Step 1

Identify terminal behavior

Step 2

Specify entry behaviors

Step 3

List the steps leading to the terminal behavior

Step 4

Sequence the steps in the order in which they will be taught

HANDOUT 2

Terminal Goal: Given verbal directions, pupil will wash hands independently

Entry Behaviors:

Steps Involved: Arrange these steps in the correct sequence.

turn off water, put down towel, put hands in water, put down soap, rub hands together, pick up soap, dry hands, come to sink, turn on water, rub the soap on the hands, rinse hands under water, pick up towel.

Correct sequence:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________

HANDOUT 3

Terminal Goal: When presented with 25 flash cards with addition facts, single digit + single digit sums to 18, Shaun will orally say the sum with 100% accuracy over 10 trials.

Entry Behaviors: Names numerals to 18.
Associates number with numeral.
Understands combining of sets.
Writes numerals to 18.

Sequence Steps:
1. Sums to 0 and 1.
2. Sums to 0, 1, 2.
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________
13. ____________________
14. ____________________
15. ____________________
16. ____________________
17. ____________________
18. ____________________
19. ____________________

HANDOUT 4

SKILL SEQUENCE SAMPLES

This is a sample packet of skill sequences provided for your use in designing skill sequences which best meet the needs of your students. We do not recommend adopting the sequences herein included, but adapting them to meet the unique characteristics of your situation, your school, your classroom, and your students.

With special thanks to Title III, Project INSTRUCT, Anita Archer, Barbara Bateman, Becker, Engelmann & Thomas, and others who have made contributions to the sequences included in this packet.

Materials compiled by Sue Shoemaker & Corky McGuigan, Support Competency Assistance Training Project, Boise, Idaho.

HANDOUT 4

SAMPLE SEQUENCE: READING

LETTER NAMES

PHONIC ANALYSIS SKILLS

Letter sounds

- Single consonant (initial, final)
- Consonant blends (initial, final)
- Digraphs (initial, final)

Vowel sounds

- Short vowel sounds (isolation, context)
- Long vowel sounds (isolation, context)
- Vowel diphthongs
- R-controlled vowel sounds

Consonant Variants (soft, hard c, g; silent consonants)

STRUCTURAL ANALYSIS SKILLS

Syllabication

Contractions

Endings

Prefixes, Suffixes & root words

HANDOUT 4

READING SKILLS CHECKLIST

(sorry, no source)

READINESS

- Listening
- Appreciation
- Following Directions
- Eye-hand coordination
- Likenesses & differences
- Left to Right

PHONETIC ANALYSIS

- Know the alphabet
- Consonant sounds
  - initial
  - final
  - medial
  - blends
  - digraphs
  - soft and hard sounds
- Vowels
  - long
  - short
  - vowel plus r
  - diphthongs
  - digraphs
- Silent letters

STRUCTURAL ANALYSIS

- Prefixes
- Suffixes
- Plurals
- Possessives
- Verb Formations & Tense
- Compound words
- Contractions
- Root words
- Syllabication
- Accents

VOCABULARY DEVELOPMENT

- Sight words related to series
- Synonyms
- Homonyms
- Antonyms
- Multiple word meanings
- Rhyming Words

SENTENCE STRUCTURE

- Complete Sentences
- Phrasing
- Paragraphs

LOCATING INFORMATION

- Table of contents
- Index-Glossary
- Alphabetical Order
- Dictionary Skills
- Encyclopedia
- Library Skills
  - card catalog
  - library terms

ORAL READING

- Fluency
- Expression
- Punctuation

APPRECIATION FOR READING

- Reading for enjoyment
- Self-selected material
- Silent Reading

COMPREHENSION

- W's (what, where, when, who, why)
- Context clues
- Titling
- Main Idea
- Detail
- Skimming
- Drawing Conclusions
- Classifying
- Sequencing
- Inferred meanings
- Interpretation
- Summarizing
- Cause & effect
- Fact or fiction
- Comparison
- Opinion
- Identifying mood
- Reading & applying directions independently

BREAKDOWN: READING

Word Recognition

PHONIC RECOGNITION:

Alphabet

- letter names
- consonants/vowels
- alphabetic order

Consonants

- consonant sounds
- consonant digraphs
- consonant blends

Vowels

- vowel sounds
- short sounds
- long sounds
- vowel digraphs
- vowel diphthongs

Variant Sound-spellings

- vowel controllers
- silent letters
- homonyms

STRUCTURAL RECOGNITION:

Word configuration:

- words with similar letters
- roots
- prefixes, suffixes
- syllabication
- accent
- compound words
- hyphenated words

Word Forms:

- contractions
- plurals
- possessives
- abbreviations
- verb tenses
- adjective forms

DETERMINING WHAT TO TEACH

HANDOUT 4

SEQUENCE: SAMPLE

Letter names
Consonant Sounds

Short a with phonograms
-ck, -ss

Short i with phonograms
-ff, -zz, -ll

Two-letter consonant blends with s, l, r,
-nt, -nd, -mp, -ft

Short o with phonograms
-ng, -nk

Digraphs wh, th, ch, sh, ph

Short u with phonograms

Short e with phonograms

Review Skill: all consonants, short vowels, digraphs, blends

Contractions

Long a spelled a_e, ay, ai

Long i spelled i_e, y

Long o spelled u_e

Long u spelled u_e

Long e spelled e, ea, ee

Review Skill: all long and short vowels, digraphs, blends

Endings (y, ly, ed, es, "s, ing, er, est)

Silent consonants (kn, wr, -dge, -mb, -gh, -tch)

Compound words

Vowel sounds with r (er, ur, or, ir, ar, ear, air, are)

Consonant variants (two sounds of c, g)

Diphthongs (oi, oy, ow, ou)

Sounds spelled oo, aw, al, au

Prefixes, suffixes

Multi-syllable words

Review

SAMPLE SEQUENCE

The following phonetic skill sequences utilize these steps:

1) The child can auditorially discriminate letter combinations.
2) The child can demonstrate phoneme-grapheme relationships.
3) The child can decode words in isolation using focus elements.
4) The child can decode words in context using focus elements.

Consonant sounds.

R Blends (br, cr, dr, fr, gr, pr, tr)

L Blends (bl, cl, fl, gl, pl, sl)

S Blends (sc, sk, sm, sn, sp, st, sw)

Consonant digraphs (final, initial ch, sh,th,ph)

Vowel Sounds (short, long a, i, o, u,e)

CVC words (a, i, e, o, u)

CVCE words (a, i, e, o, u)

CVVC (ai, ay, ee, ea, oa, ui)

Two sounds of c (k-e,i,y; s-o,a,u)

Two sounds of g (soft-e,i,y; hard-o,a,u)

Sounds of y (initial position, final position)

R controlled vowels (ar, are, or, er, ir, ur,air)

Vowel combinations (oo, oo, ou, ou, ow, oi, oy)

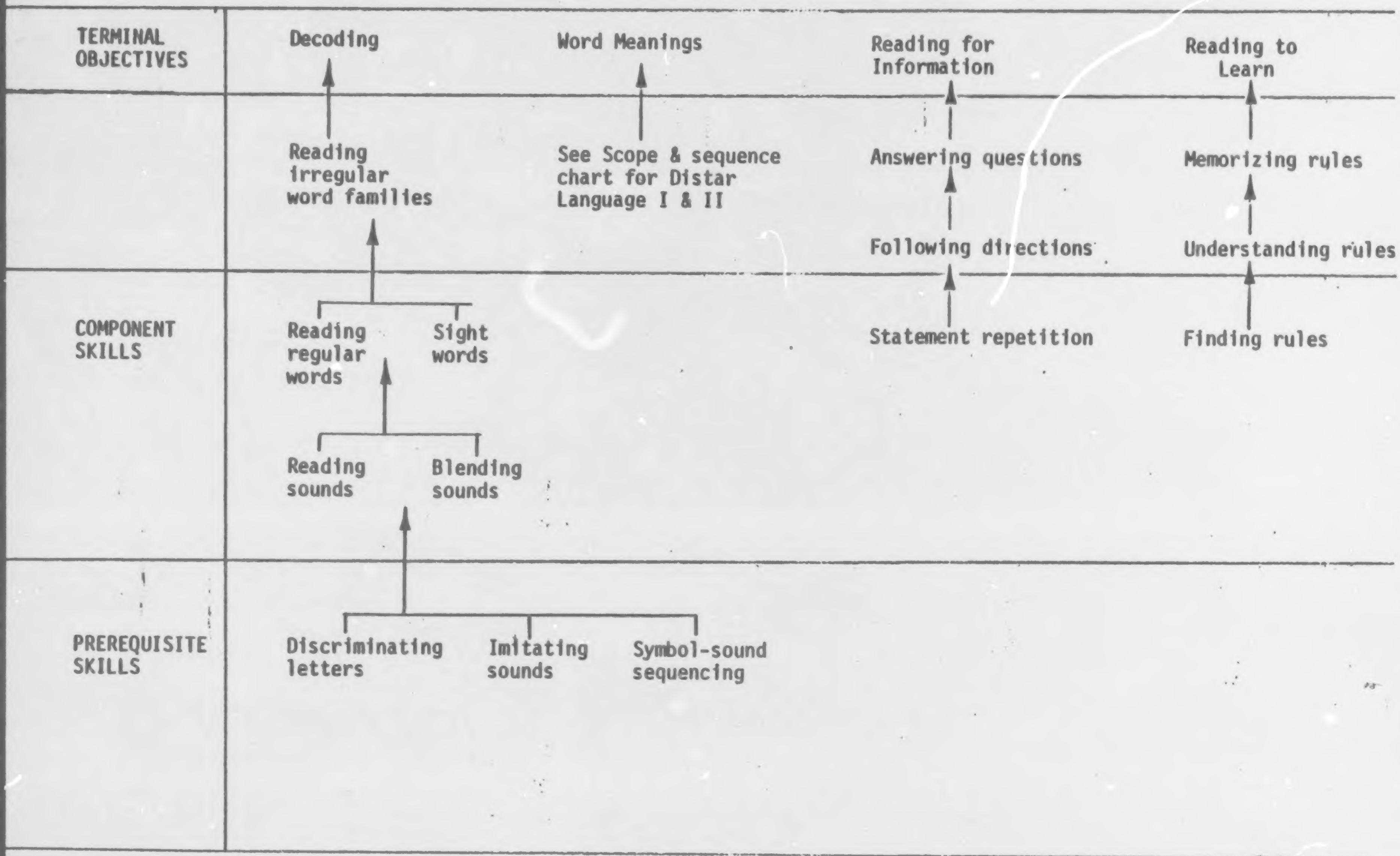
Contractions

Compound Words

Prefixes, Suffixes

Word Endings

SEQUENCE FOR READING COMPREHENSION


TERMINAL OBJECTIVES
COMPONENT SKILLS
PREREQUISITE SKILLS
Decoding
Reading irregular word families
Reading regular words
Sight words
Reading sounds
Blending sounds
Discriminating letters
Imitating sounds
Symbol-sound sequencing
Word Meanings
See Scope & sequence chart for Distar Language I & II
Reading for Information
Answering questions
Following directions
Statement repetition
Reading to Learn
Memorizing rules
Understanding rules
Finding rules

from: Teaching 2, Cognitive Learning & Instruction
Becker, Engelmann, Thomas, 1975

Teaching Sequence for Writing a Paragraph: Sample

Entering Behaviors:

Can write a simple sentence with action and naming words included in each sentence.

When asked a question can give a three-four sentence answer.

Can give three-four sentences on the same subject.

Steps:

1. Given topic will write two sentences that both relate to subject.
2. Given topic will write three related sentences.
3. Given a topic will write a summary sentence and one supportive sentence.
4. Given a topic will write a summary sentence and two supportive sentences.
5. Given a topic will write a summary sentence and three supportive sentences.
6. Given a properly indented and completed sentence will add punctuation.
7. Given a list of three sentences will arrange into paragraph form including indenting, punctuation, period, and capitals.
8. Given a topic will write a summary sentence and two supportive sentences using proper paragarph form.
9. Given a topic will write a summary sentence and three supportive sentences using proper paragraph form.

Application:

10. Given a question from context material will form a paragraph of atleast three sentences to answer that question.
11. Given a contextual article or story will write a summary paragraph of atleast three sentences in proper paragraph form.

ADDITION SEQUENCE

Addition Facts: (single digit + single digit, sums less than 18)

1. addend of 0, sums less than 9
2. addend of 1, sums less than 10
3. addend of 2, sums less than 10
4. addend of 3, sums less than 10
5. addend of 4, sums less than 10
6. addend of 5, sums less than 10
7. addend of 6, sums less than 10
8. addend of 7, sums less than 10
9. addend of 8, sums less than 10
10. addend of 9, sums less than 10

11. addend of 2, sums less than 18
12. addend of 3, sums less than 18
13. addend of 4, sums less than 18
14. addend of 5, sums less than 18
15. addend of 6, sums less than 18
16. addend of 7, sums less than 18
17. addend of 8, sums less than 18
18. addend of 9, sums less than 18

Subtraction Facts: (minuend to 18, subtrahend to 9)

1. minuend of 0, 1, 2
2. minuend of 1, 2, 3
3. minuend of 2, 3, 4
4. minuend of 3, 4, 5
5. minuend of 0-5, review
6. minuend of 4, 5, 6
7. minuend of 5, 6, 7
8. minuend of 6, 7, 8
9. minuend of 7, 8, 9
10. minuend of 8, 9, 10
11. minuend of 0-10 review
12. minuend of 9, 10, 11
13. minuend of 10, 11, 12
14. minuend of 11, 12, 13
15. minuend of 12, 13, 14
16. minuend of 13, 14, 15
17. minuend of 14, 15, 16
18. minuend of 15, 16, 17, 18
19. minuend of 11-18 review
20. minuend of 0-18 review

Multiplication Facts: (single digit times single digit)

1. n x 0 or 0 x n
2. n x 1 or 1 x n
3. n x 2 or 2 x n
4. n x 3 or 3 x n
5. n x 4 or 4 x n
6. n x 5 or 5 x n
7. review all steps, facts through x 5
8. n x 6 or 6 x n

9. n x 7 or 7 x n
10. n x 8 or 8 x n
11. n x 9 or 9 x n
12. review all steps, facts through x 9

Division Facts: (one digit into one or two digits with one digit quotient, no remainder, inverse of multiplication facts)

1. divisor of 1
2. divisor of 2
3. divisor of 3
4. divisor of 4
5. divisor of 5
6. review of facts with divisors 1-5
7. divisor of 6
8. divisor of 7
9. divisor of 8
10. divisor of 9
11. review of facts with divosors 1-9

SAMPLE SEQUENCE FOR ADDITION OPERATIONS

1. 2 digit plus 1 digit, no regrouping
2. 2 digit plus 2 digit, no regrouping
3. 3 digit plus 1 digit, no regrouping
4. 3 digit plus 2 digit, no regrouping
5. 3 digit plus 3 digit, no regrouping

6. addition of three 1 digit numbers, sums to 10
7. addition of four 1 digit numbers, sums to 10

8. 2 digit plus 1 digit, regroup to the tens
9. 2 digit plus 2 digit, regroup to the tens
10. 3 digit plus 1 digit, regroup to tens
11. 3 digit plus 1 digit, regroup to tens and hundreds
12. 3 digit plus 2 digit, regroup to tens
13. 3 digit plus 2 digit, regroup to tens and hundreds
14. 3 digit plus 2 digit, regroup to all columns
15. 3 digit plus 3 digit, regroup to tens
16. 3 digit plus 3 digit, regroup to hundreds
17. 3 digit plus 3 digit, regroup to all columns

18. addition of three 1 digit, sums greater than 10
19. addition of four 1 digit, sums greater than 10
addition of three 2 digit, no regrouping
21. addition of four 2 digit, no regrouping
22. addition of three 3 digit, no regrouping
23. addition of four 3 digit, no regrouping
24. addition of three varying digits, no regrouping
25. addition of three 2 digit, regrouping
26. addition of four 2 digit, regrouping
27. addition of three 3 digit, regrouping
28. addition of four 3 digit, regrouping
29. addition of three with varying digits, regrouping

1. $\begin{array}{r} 43 \\ +\ 2 \\ \hline 45 \end{array}$ 2. $\begin{array}{r} 34 \\ +25 \\ \hline 59 \end{array}$ 3. $\begin{array}{r} 421 \\ +\ \ 3 \\ \hline 424 \end{array}$ 4. $\begin{array}{r} 863 \\ +\ 34 \\ \hline 897 \end{array}$ 5. $\begin{array}{r} 603 \\ +295 \\ \hline 898 \end{array}$ 6. $\begin{array}{r} 2 \\ +\ 3 \\ 1 \\ \hline 6 \end{array}$ 7. $\begin{array}{r} 4 \\ +\ 0 \\ 1 \\ 2 \\ \hline 7 \end{array}$ 8. $\begin{array}{r} \overset{1}{3}3 \\ +\ 9 \\ \hline 42 \end{array}$ 9. $\begin{array}{r} \overset{1}{3}9 \\ +\ 27 \\ \hline 66 \end{array}$

10. $\begin{array}{r} 4\overset{1}{3}6 \\ +\ \ 8 \\ \hline 444 \end{array}$ 11. $\begin{array}{r} \overset{1}{4}\overset{1}{9}8 \\ +\ \ 9 \\ \hline 507 \end{array}$ 12. $\begin{array}{r} 6\overset{1}{3}9 \\ +\ 25 \\ \hline 664 \end{array}$ 13. $\begin{array}{r} \overset{1}{5}72 \\ +\ 84 \\ \hline 656 \end{array}$

SEQUENCE FOR SUBTRACTION OPERATIONS

1. two digit minus one digit, no regrouping
2. two digit minus two digit, no regrouping
3. three digit minus one digit, no regrouping
4. three digit minus two digit, no regrouping
5. three digit minus three digit, no regrouping
6. two digit minus one digit, regroup from tens
7. two digit minus two digit, regroup from tens
8. three digit minus one digit, regroup from tens
9. three digit minus one digit with zero in tens place, regroup from tens and from hundreds
10. three digit minus two digit, regroup from tens
11. three digit minus two digit, regroup from hundreds
12. three digit minus two digit, regroup (no zeros in tens)
13. three digit minus two digit with zero in tens, regroup
14. three digit minus three digit, regroup from tens
15. three digit minus three digit regroup from hundreds
16. three digit minus three digit, regroup (no zeros in tens)
17. three digit minus three digit with zero in tens place of minuend, regroup

1. $$\begin{array}{r} 24 \\ -\ 3 \\ \hline 21 \end{array}$$

2. $$\begin{array}{r} 49 \\ -28 \\ \hline 21 \end{array}$$

3. $$\begin{array}{r} 429 \\ -\ 7 \\ \hline 422 \end{array}$$

4. $$\begin{array}{r} 875 \\ -\ 34 \\ \hline 841 \end{array}$$

5. $$\begin{array}{r} 987 \\ -624 \\ \hline 363 \end{array}$$

6. $$\begin{array}{r} \overset{3}{\cancel{4}}{}^{1}2 \\ -\ 9 \\ \hline 33 \end{array}$$

7. $$\begin{array}{r} \overset{4}{\cancel{5}}{}^{1}6 \\ -\ 28 \\ \hline 28 \end{array}$$

8. $$\begin{array}{r} 3\overset{8}{\cancel{9}}{}^{1}6 \\ -\ 9 \\ \hline 387 \end{array}$$

9. $$\begin{array}{r} \overset{8}{\cancel{9}}\overset{17}{\cancel{0}}{}^{1}8 \\ -\ 9 \\ \hline 899 \end{array}$$

10. $$\begin{array}{r} 4\overset{6}{\cancel{7}}2 \\ -39 \\ \hline 433 \end{array}$$

11. $$\begin{array}{r} \overset{3}{\cancel{4}}{}^{1}23 \\ -\ 92 \\ \hline 331 \end{array}$$

12. $$\begin{array}{r} \overset{3}{\cancel{4}}\overset{1}{\cancel{7}}{}^{1}2 \\ -\ 96 \\ \hline 376 \end{array}$$

13. $$\begin{array}{r} \overset{4}{\cancel{5}}\overset{9}{\cancel{0}}{}^{1}6 \\ -\ 97 \\ \hline 409 \end{array}$$

14. $$\begin{array}{r} 4\overset{6}{\cancel{7}}2 \\ -349 \\ \hline 123 \end{array}$$

15. $$\begin{array}{r} \overset{4}{\cancel{5}}27 \\ -153 \\ \hline 374 \end{array}$$

16. $$\begin{array}{r} \overset{6}{\cancel{7}}\overset{1}{\cancel{1}}{}^{1}2 \\ -379 \\ \hline 333 \end{array}$$

17. $$\begin{array}{r} \overset{4}{\cancel{5}}\overset{9}{\cancel{0}}{}^{1}7 \\ -279 \\ \hline 228 \end{array}$$

SEQUENCES FOR MULTIPLICATION OPERATIONS

1. one digit times two digit, no regrouping
2. one digit times three digit, no regrouping
3. one digit times four digit, no regrouping
4. one digit times two digit, regrouping
5. one digit times three digit, regrouping
6. one digit times four digit, regrouping
7. two digit times two digit, no regrouping
8. two digit times two digit, regrouping
9. two digit times three digit, no regrouping
10. two digit times three digit, regrouping
11. three digit times three digit, no regrouping
12. three digit times three digit, regrouping

1. $\begin{array}{r} 24 \\ \times 2 \\ \hline 48 \end{array}$

2. $\begin{array}{r} 320 \\ \times 3 \\ \hline 960 \end{array}$

3. $\begin{array}{r} 2402 \\ \times 2 \\ \hline 4804 \end{array}$

4. $\begin{array}{r} \overset{1}{4}6 \\ \times 3 \\ \hline 138 \end{array}$

5. $\begin{array}{r} 345 \\ \times 5 \\ \hline 1725 \end{array}$

6. $\begin{array}{r} 1570 \\ \times 5 \\ \hline 8850 \end{array}$

7. $\begin{array}{r} 33 \\ \times 21 \\ \hline 33 \\ 66 \\ \hline 693 \end{array}$

8. $\begin{array}{r} 43 \\ \times 84 \\ \hline 172 \\ 344 \\ \hline 3612 \end{array}$

9. $\begin{array}{r} 430 \\ \times 21 \\ \hline 430 \\ {}^{1}860 \\ \hline 9030 \end{array}$

10. $\begin{array}{r} \overset{2}{5}\overset{1}{3}2 \\ \times 27 \\ \hline {}^{1}3724 \\ 1064 \\ \hline 1,4364 \end{array}$

11. $\begin{array}{r} 402 \\ \times 211 \\ \hline 402 \\ 402 \\ 804 \\ \hline 84,822 \end{array}$

12. $\begin{array}{r} {}^{2}\overset{1}{4}\overset{3}{2}6 \\ \times 385 \\ \hline 2{}^{1}130 \\ {}^{1}3408 \\ 1278 \\ \hline 164,010 \end{array}$

SEQUENCE FOR DIVISION OPERATIONS

1. one digit into two digit, one subtraction with remainder
2. one digit into two digit, two subtractions no remainder
3. one digit into two digit, two subtractions with remainder
4. one digit into three digit, two subtractions no remainder
5. one digit into three digit, two subtractions with remainder
6. one digit into three digit, three subtractions no remainder
7. one digit into three digit, three subtractions remainder
8. two digit into two digit, one subtraction, no remainder
9. two digit into two digit, one subtraction, with remainder
10. two digit into three digit, one subtraction, no remainder
    (usually more difficult to estimate product)
11. two digit into three digit, one subtraction, remainder
12. two digit into three digit, two subtractions no remainder
13. two digit into three digit, two subtractions, remainder

① 9 R1
2)19
18
1

② 24
3)72
6
12
12

③ 19 R2
3)59
3
29
27
2

④ 65
3)195
18
15
15

⑤ 36 R2
8)290
24
50
48
2

⑥ 123
8)984
8
18
16
24
24

⑦ 134 R1
4)537
4
13
12
17
16
1

⑧ 2
15)30
30
0

⑨ 2 R5
42)89
84
5

⑩ 9
23)207
207

⑪ 6 R2
42)254
252
2

⑫ 21
45)945
90
45
45
0

⑬ 38 R23
24)935
72
215
192
23

HANDOUT 5

GUIDELINES FOR CHOOSING DATA [18]

You want information about: (Critical Dimensions)	So you will collect: (Type of Data)	Which requires the following information:
Changes in the pupil's accuracy of performance	Percent Data	Correct # of correct responses Total # of responses Error # of error responses Total # of responses
Changes in the pupil's proficiency of performance (Accuracy and fluency)	Rate Data	# of correct responses # of error responses Length of time measured
How quickly a pupil responds to a cue	Latency Data	Time elapsing from the completion of the cue to the beginning of the pupil's response
How long a pupil's response lasts	Duration Data	Time elapsing from the initiation of the pupil's response to the completion of the response
How much help a pupil requires in completing a task. (Note that in a sense it is the teacher's behavior which is being monitored here).	Levels of Assistance	The # of trials completed for each designated level of assistance (e.g., # trials with verbal cue, # trials with demonstration # trials with full physical assistance, etc.)

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[18] Lynch, V., Flanagan, K., Pennell, O. Implementing Data Collection and Charting Conventions in Harring (Ed). The Experimental Education Training Program: An Inservice Program for Personnel Serving the Severely Handicapped. Seattle, Washington. 1976.

HANDOUT 6

SOME APPROPRIATE MEASUREMENT CRITERIA FOR GOAL AREAS[19]

Amount of Completions for Specific Tasks

- Survival Tasks
- Self Help Tasks
- Job/Voc. Tasks
- Life Sports
- Classroom Behavior

Duration or Average Duration

- Classroom Behavior
- Staying On Task
- Free Time Activities

Accuracy or Percent

- Comprehension
- Grammar
- Speech
- Spelling Words
- Sentence Structure
- Telling Time
- Measurement
- Sequencing
- Following Directions
- Tracing
- Writing Math Computation Answers

Rate or Fluency

- Word Attack Skills
- Reading Words, Phrases, Sentences
- Saying or Writing Math Fact Answers
- Writing Math Computation Answers
- Saying or Writing Numbers or Letters
- Saying Letter Sounds
- Telling Time
- Measurement
- Writing Manuscript or Cursive
- Spelling Words
- Sequencing

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[19] From: Archer, A. Implementing Individualized Educational Plans: Workshop material prepared for Idaho State Department of Education, Boise, Idaho, 1978.

HANDOUT 7

Placement test for Patterns, Sounds and Words:

DIRECTIONS: Have the child read across the page. As the child reads orally, record the oral responses. After the test has been completed, calculate the errors. If the child misses five consecutive words, terminate the subtest and move on to the next subtest.

SUBTEST 1: Short vowels

yam	kid	cot	yet	nun
tax	fin	hop	wet	mud
rap	hid	lot	bet	mum
ram	lip	mob	hem	bun
map	rid	rot	led	sub

ANALYSIS

	Correct	Error
a(5)		
i(5)		
o(5)		
e(5)		
u(5)		

SUBTEST 2: CVCC with ll, ss, nk, sk, nd, ng, nt, st, and mp.

bask	ding	moss	best	lung
camp	fill	bond	bent	hunk
mass	risk	pond	jest	bunk
land	wing	romp	sent	bump
rant	mill	lost	less	dusk
sank	kill			

	Correct	Error
ll(3)		
ss(3)		
nk(3)		
sk(3)		
nd(3)		
ng(3)		
nt(3)		
st(3)		
mp(3)		

SUBTEST 3: CVCe with a, o, i and u.

babe	zone	bike	cube
fate	yoke	mine	cute
gate	lone	pipe	duke
lane	coke	side	dune
hate	hole	wipe	fuse

	Correct	Error
CVCe with a(5)		
CVCe with o(5)		
CVCe with i(5)		
CVCe with u(5)		

HANDOUT 8

Informal Assessment Tool
for decoding CVCe words with short vowels

Direct student to read each word aloud. Record the oral responses.

Sequence Step:	Items for Assessment
1) decode CVC words, short a	
2) decode CVC words, short i	
3) decode CVC words, short o	
4) decode CVC words, short e	
5) decode CVC words, short u	
6) decode CVC words, all vowels	
7) decode CVCe words, short a	
8) decode CVCe words, short i	
9) decode CVCe words, short o	
10) decode CVCe words, short e	
11) decode CVCe words, short u	
12) decode CVCe words, all vowels	

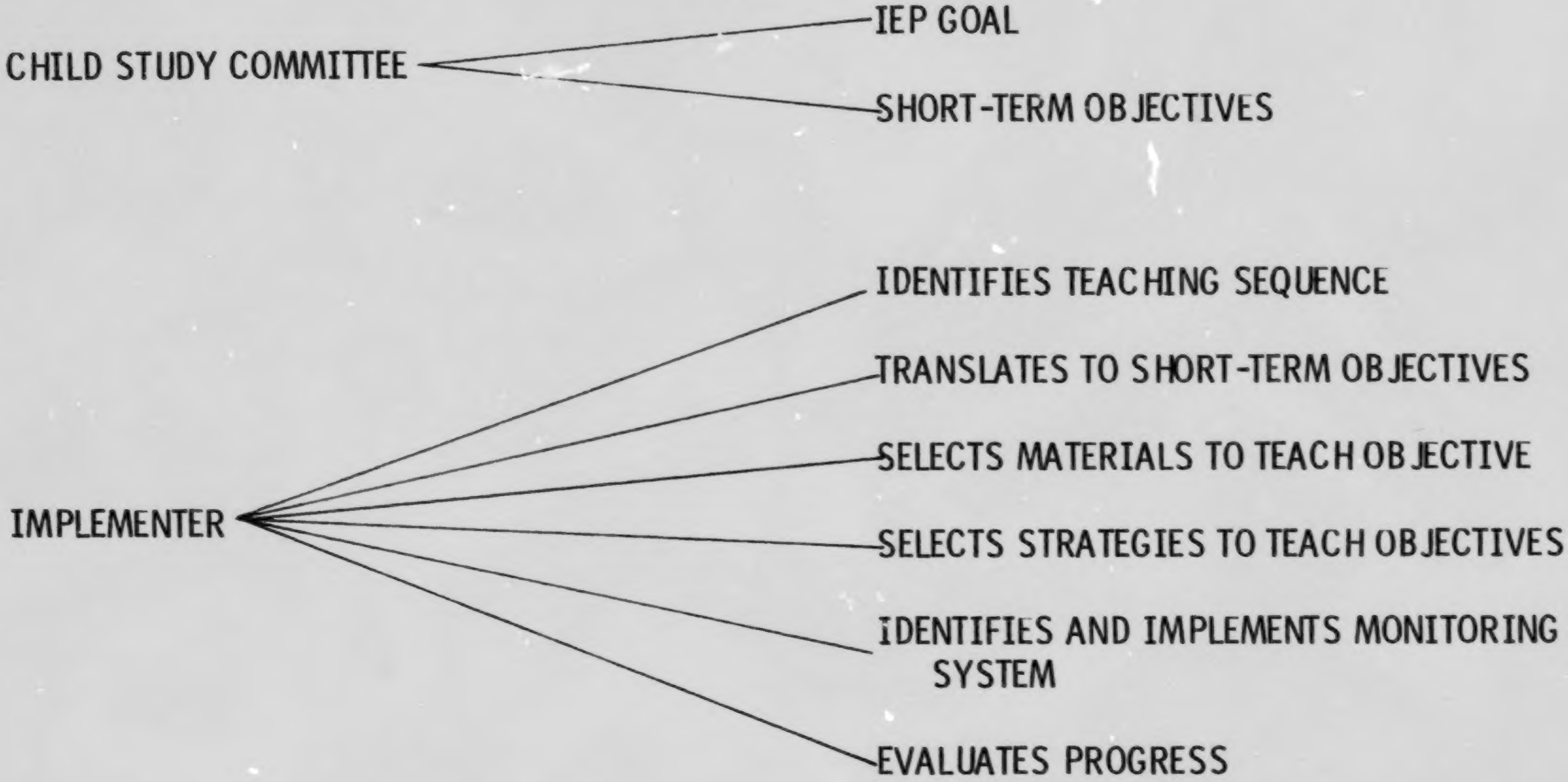
Objectives: At the completion of this component, the participants will be able to:

1. Perform a simple task analysis.

2. Identify appropriate measurement systems for instructional objectives.

3. Translate instructional sequence steps into instructional objectives.

4. Write informal assessment items for an instructional sequence.



CHILD STUDY COMMITTEE
- IEP GOAL
- SHORT-TERM OBJECTIVES

IMPLEMENTER
- IDENTIFIES TEACHING SEQUENCE
- TRANSLATES TO SHORT-TERM OBJECTIVES
- SELECTS MATERIALS TO TEACH OBJECTIVE
- SELECTS STRATEGIES TO TEACH OBJECTIVES
- IDENTIFIES AND IMPLEMENTS MONITORING SYSTEM
- EVALUATES PROGRESS

DECIDING WHAT TO TEACH

IMPLEMENTING THE IEP
DETERMINING WHAT TO TEACH

T-3

*Complete one (1) form for each goal as stated on the IEP.

Student

School

Teacher

*Long-range Goal:

Entry level:

objective	materials

INSTRUCTIONAL SEQUENCE USING TASK ANALYSIS

Terminal Objective: Student will write letters of the alphabet correctly at the rate of 50/minute, 0 errors, in 2 weeks.

Entry Skills: Can hold a pencil
make a circle
make a straight line

Initial Objective: Given a letter series on paper, the student can trace the letters at a rate of 4/minute, 2 errors, in 5 days.

Enabling Objectives:

Given a set of letters with faced cues, the student will trace over the cues at a rate of 10/minute, 2 errors, in 2 days.

Given a model of letters, the student will write the letters at a rate of 20/minute, 2 errors, in 5 days.

Given oral directions, the student will write known letters at a rate of 50/ minute, 0 errors.

Given directions to write a specific letter, the student will write the correct letter within 1 second of command (analogous).

Given direction to write letters of the alphabet, the student will write the letters correctly at the rate of 50/minute, 0 errors (equivalent).

Reinforcement: A chart will be devised so that when student meets daily criterion, a star can be placed on the chart.

SAMPLE TASK ANALYSIS

Terminal Goal: Given verbal directions, pupil will wash hands independently.

Entry Behaviors: Grasp motion
Turn motion
Concept of wet and dry
Concept of water

Steps Involved:

1) Come to the sink
2) Turn on the water
3) Put hands in the water
4) Pick up the soap
5) Rub the soap on the hands
6) Put down the soap
7) Rub hands together
8) Rinse hands under water
9) Turn off the water
10) Pick up the towel
11) Dry hands
12) Put down the towel

SAMPLE TASK ANALYSIS

Terminal Goal: When presented with 25 flash cards with addition facts, single digit + single digit sums to 18, Shaun will orally say the sum with 100% accuracy over 10 trials.

Entry Behaviors: Names numerals to 18
Associates number with numeral
Understands combining of sets
Writes numerals to 18

Sequence Steps:

1) sums to 0 and 1
2) sums to 0, 1, 2
3) sums to 1, 2, 3
4) sums to 2, 3, 4
5) sums to 3, 4, 5
6) review sums to 5
7) sums to 4, 5, 6
8) sums to 5, 6, 7
9) sums to 6, 7, 8
10) sums to 7, 8, 9
11) sums to 8, 9, 10
12) review sums to 10
13) sums to 9, 10, 11
14) sums to 10, 11, 12
15) sums to 11, 12, 13
16) sums to 12, 13, 14
17) sums to 13, 14, 15, 16
18) sums to 15, 16, 17, 18
19) review of sums to 18

DEVELOPING A TEACHING SEQUENCE FROM A LONG TERM GOAL

GOAL STATEMENT: HECTOR WILL DECODE CVCe WORDS WITH SHORT VOWELS WITH 100% ACCURACY.

ENTRY BEHAVIORS: HE RECOGNIZES THE SOUND OF BEGINNING AND ENDING CONSONANTS T, D, S, P, M.

SEQUENCE	OBJECTIVES
1)	1)

MATH SEQUENCE FROM COMMERCIAL MATERIAL

Solves addition problems

2 digit + 2 digit with regrouping

Solves addition problems

3 digit + 3 digit with regrouping

Solves addition problems

4 digit + 4 digit with regrouping

OBJECTIVES ILLUSTRATING DATA COLLECTION

% OF ACCURACY:

Jane will decode with 90% accuracy the words of a CVC pattern on a teacher made list.

Tom will read a selection from a second grade reader and answer comprehension questions about the selection with 90% accuracy.

RATE:

Jane will read orally from a second grade text with a minimum of 50 wpm, 2 or less errors.

Tom will sort 25 bolts from the container in 30 seconds with 2 errors.

DURATION:

Jane will exhibit on task behavior for 15 of the 20 minute instructional period.

*Complete one (1) form for each goal as stated on the IEP.

Student HECTOR
School
Teacher

*Long-range Goal:

WHEN GIVEN A TASK, HECTOR WILL COMPLETE THE TASK WITHIN 15 MINUTES WITH 80% ACCURACY (WEEKLY OBJECTIVES).

Entry level:

CAN ATTEND TO TASK FOR 5 MINUTES; HAS 80% ERROR RATE ON SPELLING WORDS.

objective	materials
GIVEN A LIST OF 5 WORDS ON LM, HECTOR WILL SAY WORDS CORRECTLY 100% OF TIME. DATE STARTED: 4/26/80 DATE MASTERED: 4/27/80	USE A TIMER FOR THE TASK. EACH CORRECT RESPONSE EARNS A POINT FOR TIME AT THE ART CENTER, AS DOES COMPLETION OF TASK WITHIN TIME SET. 1 POINT = 1 MINUTE.
GIVEN A LIST OF 5 WORDS ORALLY, HECTOR WILL WRITE MISSING LETTER ON WORKSHEET WITH 80% ACCURACY, CORRECTING EACH WORD AND COMPLETING TASK IN 10 MINUTES.	USE LANGUAGE MASTER AND SPELLING WORDS FROM GOALS IN SPELLING, LEV. 2
DATE STARTED: DATE MASTERED:	
GIVEN A LIST OF WORDS ORALLY, HECTOR WILL WRITE EACH WORD WITH 50% ACCURACY, CORRECTING EACH ERROR UPON COMPLETION OF THE TAPED LESSON, IN 10 MINUTES.	
DATE STARTED: DATE MASTERED:	
ON FRIDAYS, GIVEN A LIST OF 10 WORDS ORALLY, HECTOR WILL WRITE EACH WORD WITH 80% ACCURACY, COMPLETING THE TASK WITHIN 15 MINUTES.	
DATE STARTED: DATE MASTERED:	

STEPS IN DETERMINING WHERE TO BEGIN IN THE INSTRUCTIONAL SEQUENCE

1) Select items which could be used to measure each sequence step.

2) Arrange these items in the same order as the instructional sequence.

3) Administer the assessment tool to the child.

4) Determine an appropriate starting place.

INFORMAL ASSESSMENT TOOL FROM MATH SEQUENCE

Sequence Step:	Items on Assessment:	
2-digit + 1-digit regroup to tens	33 9	47 8
2-digit + 2-digit regroup to tens	39 27	24 38
3-digit + 1-digit regroup to tens	436 8	275 6
3-digit + 1-digit regroup to tens and to hundreds	498 9	594 9
3-digit + 2-digit regroup to tens	639 25	728 36
3-digit + 2-digit regroup to hundreds	572 84	663 86
3-digit + 2-digit regroup to all columns	467 99	876 48

IMPLEMENTING THE IEP:
SELECTING AND MATCHING MATERIALS FOR TEACHING

USAGE SUMMARY

Purpose: Develop skills in selection, utilization and modification of teacher-made and commercial materials to teach needed skills (Task 3).

Objectives: Upon completion of this unit, participants will:

--use an evaluation tool for selecting appropriate materials to match learner styles and characteristics

--determine an instructional sequence from commercially made materials

--demonstrate the ability to modify the instructional sequence to meet individual student needs.

--utilize instructional sequences to write short-term objectives.

Materials:

Handouts 1-3

Transparencies 1-4

Instructional Materials for the Mildly Handicapped

Time: 1 hour, 45 minutes

IEP IMPLEMENTATION:
SELECTING AND MATCHING MATERIALS FOR TEACHING

PRESENTATION OUTLINE

I. Selection of Commercial Materials

II. Matching Materials to Learner Characteristics

III. Adapting Commercial Materials

   A. Extracting a sequence

   B. Adapting practice activities

IV. Preparing Teacher-Made Materials

   A. Task: Is it relevant?

   B. Feedback: Is it adequate?

   C. Format: Is it appropriate?

5

SPECIAL NOTES TO THE TRAINER

Pages S-5-6 require the trainer to pass out a case study consisting of long term goals and learner characteristics. Prepare this in advance using a student with whom you are familiar. Also use instructional materials with which the participants are likely to be familiar.

SCRIPT TEXT

ONCE THE INSTRUCTIONAL OBJECTIVES AND ENTRY SKILLS OF THE LEARNER HAVE BEEN IDENTIFIED, THE TEACHER HAS THREE OPTIONS WHEN SELECTING MATERIAL TO TEACH THOSE OBJECTIVES:

1. ADOPT COMMERCIAL MATERIALS AND USE THEM.
2. ADAPT COMMERCIAL MATERIALS TO THE SPECIFIC INSTRUCTIONAL NEEDS OF THE LEARNER.
3. MAKE MATERIALS FOR INSTRUCTIONAL USE.

THE SELECTION OF THE MOST APPROPRIATE CURRICULUM MATERIAL IS A VERY IMPORTANT FACTOR IN STUDENT PERFORMANCE.

PASS OUT INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED

THE FIRST READING INCLUDES SOME MATERIAL ON THE SELECTION OF INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED AND A TOOL FOR EVALUATING AND SELECTING MATERIALS. THE TOOL CAN BE USED TO EVALUATE MATERIALS ON HAND AS WELL AS MAKING DECISIONS ABOUT MATERIALS TO BE PURCHASED.

POINT OUT THE READING (PP. 5-8) AND THE EVALUATION TOOL (PP. 9-25)

I WOULD LIKE YOU TO FORM TEAMS OF TWO TO READ THE SELECTION AND COMPLETE THE STUDY GUIDE. YOU WILL HAVE 15 MINUTES. IF YOU HAVE EXTRA TIME, REVIEW THE EVALUATION TOOL.

PASS OUT HANDOUT 1 (H-1)

AFTER 15 MINUTES, GO OVER THE ANSWERS WITH THE PARTICIPANTS.

SHOW TRANSPARENCY 1 (T-1)

ONCE MATERIAL HAS BEEN SELECTED, IT MAY BENEFIT YOU TO ASSESS THE MATERIAL AS IT RELATES TO THE STUDENT'S LEARNING STYLES AND CHARACTERISTICS. ON THE OVERHEAD SCREEN YOU WILL SEE THE LEARNER CHARACTERISTICS TO BE CONSIDERED.

SHOW TRANSPARENCY 2 (T-2)

READ AND DISCUSS EACH POINT, AS FOLLOWS:

1. DOES THE INSTRUCTIONAL MATERIAL MATCH THE LONG-TERM GOAL SELECTED?
   FOR EXAMPLE, IF THE LONG-TERM GOAL IS "WILL BE ABLE TO DECODE PHONETICALLY REGULAR ONE-SYLLABLE WORDS," THE TEACHER SHOULD SEARCH FOR MATERIALS THAT MEET THAT GOAL. THE CHOICES MIGHT INCLUDE A CODE-BASED BASAL OR LINGUISTIC MATERIAL.
2. DOES THE LEARNER HAVE THE REQUISITE ENTRY BEHAVIORS DEMANDED FOR SUCCESSFUL PERFORMANCE IN THE MATERIAL?
   ENTRY BEHAVIORS ARE GENERATED NOT ONLY FROM THE SKILLS BEING TAUGHT BUT ALSO FROM THE SUPPORTIVE SKILLS DEMANDED

BY THE MATERIALS. THESE SKILL-RELATED ENTRY BEHAVIORS CAN BE DETERMINED FROM THE LOWER LEVELS OF THE MATERIALS BEING USED, BY LOCATING AN AUTHOR'S STATEMENT OF ENTRY SKILLS, OR BY EXTRAPOLATING FROM A SCOPE AND SEQUENCE CHART OR BOOK. MATERIALS DIFFER GREATLY ON PRIOR EXPECTANCY, E.G., IN LOOKING FOR MATERIALS THAT TEACH ONE-SYLLABLE WORDS WITH SHORT VOWELS, ONE WILL FIND TEXTS THAT REQUIRE ALL CONSONANTS TO BE LEARNED BEFORE VOWELS ARE INTRODUCED, LONG VOWELS TAUGHT AND MASTERED BEFORE SHORT VOWELS, ETC.

3. IS THE MATERIAL COMPATIBLE WITH THE LEARNER'S AGE, GRADE, AND INTERESTS?

   ALTHOUGH THE STUDENT DOES NOT PERFORM AT THE SAME LEVEL AS AGE PEERS, THE MATERIAL SHOULD NOT REFLECT THIS LOWER-LEVEL FOCUS.

4. ARE THE PHYSICAL CHARACTERISTICS OF THE MATERIAL COMPATIBLE WITH THE LEARNER?

   THINGS TO CONSIDER ARE SIZE OF TYPE, TYPE OF ILLUSTRATIONS AND GENERAL FORMAT. THE SUBTLE CHARACTERISTICS OF MATERIAL--PRINT, TYPE, PHOTOGRAPHS, SPACING, ETC.--CAN LEAD TO EITHER TOTAL REJECTION OF THE INSTRUCTIONAL MATERIAL OR INCREASED INTEREST AND ACCEPTANCE.

5. DOES THE MATERIAL INCORPORATE MOTIVATIONAL DEVICES THAT WILL CAPTURE AND MAINTAIN THE INTEREST OF THE LEARNER?

   NUMEROUS DEVICES, SUCH AS SELF-CHARTING, GAME FORMAT, PUPPETS, GRAPHICS, RELEVANCE TO EVERYDAY LIFE, POINTS AWARDED FOR MASTERY, AND INTERMITTENT PRAISE, MIGHT BE USEFUL.

6. IS THE FORMAT COMPATIBLE WITH THE LEARNER NEEDS AND DOES IT FIT THE NEEDS OF THE CLASSROOM?

   ALMOST ALL CONTENT CAN BE TAUGHT IN NUMEROUS WAYS; THE FORMAT IS DETERMINED BY THE INDIVIDUAL NEEDS OF THE LEARNER AND THE STRUCTURE OF THE CLASSROOM. FOR EXAMPLE, DEPENDING ON THE STAGE OF LEARNING, THE STUDENT MAY OR MAY NOT BE WORKING ON AN INDEPENDENT LEVEL, WHICH WOULD DETERMINE WHETHER TO USE DIRECT INSTRUCTION MATERIALS OR INDEPENDENT WORK TASKS. SOME STUDENTS MAY NOT BE CAPABLE OF INDEPENDENT WORK TASKS. TEACHERS WHO NEED TO WORK WITH OTHER STUDENTS CANNOT PLAN TEACHER-DIRECTED ACTIVITIES FOR ALL STUDENTS.

7. DOES THE INSTRUCTIONAL TIME DEMANDED OF THE MATERIAL MEET THE TIME ALLOTTTED IN THE CLASSROOM?

   SOME STUDENTS CAN WORK EFFICIENTLY FOR ONLY A SHORT PERIOD OF TIME, WHILE OTHERS CAN WORK FOR MORE SUSTAINED PERIODS. THE TIME ALLOTTED FOR THE INSTRUCTIONAL ACTIVITIES MUST BE MATCHED TO THE TIME DEMANDED BY THE MATERIAL.

8. DOES THE TEACHER HAVE THE NECESSARY EXPERTISE AND TRAINING TO SUCCESSFULLY USE THE MATERIAL?

   MANY MATERIALS REQUIRE SPECIFIC TRAINING; IF THE TRAINING IS NOT EASILY ACCESSIBLE AND FEASIBLE FOR THE TEACHER, OTHER MATERIALS SHOULD BE SELECTED.

WHEN YOU ARE NOT ABLE TO ADOPT AND MATCH A COMMERCIAL MATERIAL, YOU MAY CHOOSE TO ADAPT A CERTAIN COMMERCIAL

MATERIAL TO MEET THE INSTRUCTIONAL NEEDS. ADAPTING A COMMERCIAL MATERIAL INVOLVES ESTABLISHING THE TEACHING SEQUENCE AND MAKING ADDITIONS TO FILL IN GAPS (IF NECESSARY) BEFORE USING THE MATERIALS.

THERE ARE TWO WAYS TO ESTABLISH AN INSTRUCTIONAL SEQUENCE: (1) EXTRACT THE SEQUENCE FROM PUBLISHED MATERIAL, AND (2) DEVELOP YOUR OWN SEQUENCE. IF YOU ARE CONSIDERING USING A SPECIFIC MATERIAL IT IS OBVIOUSLY MORE APPROPRIATE TO EXTRACT THE SEQUENCE. ADVANTAGES OF EXTRACTING SEQUENCES INCLUDE A FAMILIARIZATION WITH THE MATERIAL AND AWARENESS OF THE GAPS IN INSTRUCTIONAL SEQUENCE.

THERE ARE FOUR STEPS TO EXTRACTING A SEQUENCE. THESE ARE EXPLAINED IN MORE DETAIL ON PAGE 28 OF YOUR TEXT:

STEP 1: DETERMINE A LONG-TERM OBJECTIVE AND SELECT AN INSTRUCTIONAL MATERIAL DESIGNED TO MEET THAT OBJECTIVE.

STEP 2: DETERMINE THE STRAND WITHIN THE MATERIAL THAT RELATES TO THE LONG-TERM OBJECTIVE.

STEP 3: GO THROUGH THE MATERIAL AND WRITE DOWN EACH NEW STEP INTRODUCED TO THE CHILD.

STEP 4: DETERMINE THE NECESSARY ENTRY BEHAVIORS.

I WOULD LIKE YOU TO FORM GROUPS OF TWO AGAIN AND READ PAGES 26-47 IN THE TEXT, THEN USING THE CASE STUDY I WILL PASS OUT, COMPLETE THE APPLICATION PROBLEMS ON PAGE 48. YOU WILL

IMPLEMENTING THE IEP:
SELECTING AND MATCHING MATERIALS FOR TEACHING

HAVE 45 MINUTES TO COMPLETE THE READING AND THE EXERCISES.

PASS OUT CASE STUDY WITH LONG-TERM GOALS AND LEARNER CHARACTERISTICS AND A SELECTED INSTRUCTIONAL MATERIAL.

ALLOW 45 MINUTES FOR THE ACTIVITY.

ASK FOR SEVERAL TEAMS TO SHARE THEIR INSTRUCTIONAL SEQUENCES.

AFTER A SEQUENCE HAS BEEN DEVELOPED AND INSTRUCTIONAL OBJECTIVES IDENTIFIED, YOU AS THE INSTRUCTOR MUST CONSIDER THE PRACTICE PROCEDURES THAT ARE PRESENTED BY THE TEXT. THE HANDICAPPED LEARNER OFTEN REQUIRES EXTENSIVE MODIFICATION AND EXPANSION OF PRACTICE MATERIALS TO ASSURE RETENTION OF THE MATERIAL. DATA INDICATE HANDICAPPED STUDENTS NEED 10+ REPETITIONS FOR RETENTION OF SKILLS. MANY TIMES EXERCISES TO REVIEW PREVIOUSLY PRESENTED MATERIALS ARE NONEXISTENT. EXAMPLES OF DIFFICULTIES ARE APPARENT IN THIS SEQUENCE EXTRACTED FROM A COMMONLY USED BASAL TEST:

DIRECT PARTICIPANTS TO REFER TO P. 70 IN I.M.M.H.

THERE ARE SEVERAL PROBLEMS WHICH WE CAN PINPOINT IN THIS MATERIAL. FIRST, THE SEQUENTIAL STEPS ARE QUITE LARGE. FOR EXAMPLE, ALL SUMS TO 10 ARE TAUGHT AT THE SAME TIME. THE MILDLY HANDICAPPED CHILD WOULD BENEFIT FROM NUMEROUS SEQUENTIAL

STEPS LEADING TO ALL SUMS TO 10. SECOND, THE PACE OF THE MATERIAL IS VERY FAST. WITHIN THE FIRST 30 PAGES THE CHILD MOVES FROM WRITING NUMERALS TO 10 TO WRITING OF NUMERALS TO 999. THIS PACE WOULD HAVE TO BE SUBSTANTIALLY SLOWED DOWN FOR THE HANDICAPPED CHILD. THIRD, VERY LITTLE PRACTICE IS PROVIDED AT EACH STEP. THE SECOND COLUMN INDICATES THE PRACTICE PAGES--BETWEEN 2 AND 8 PAGES ARE PROVIDED AT EACH STEP. THE TOTAL NUMBER OF PRACTICE ITEMS IS VERY SMALL. DURING INITIAL INSTRUCTION ON ADDITION FACTS TO 10, THE CHILD IS PRESENTED WITH 42 PROBLEMS, MANY OF WHICH CONTAIN PROMPTS ON SKILL PERFORMANCE (THAT IS, OBJECTS TO COUNT). THE MILDLY HANDICAPPED CHILD AND EVEN THE NORMAL ACHIEVING LEARNER WOULD NEED FAR MORE PRACTICE IN THIS SKILL TO REACH PROFICIENCY. A FOURTH PROBLEM FOR THE HANDICAPPED CHILD IS THE CHANGE OF FORMATS IN THE PRACTICE ACTIVITIES. ALMOST EVERY NEW PRACTICE PAGE USES A NEW PRACTICE FORMAT. FOR EXAMPLE, PRACTICE ON FACTS TO 10 INVOLVES SIX DIFFERENT PRACTICE FORMATS. WHEN THE PRACTICE FORMAT CONTINUALLY CHANGES, THE CHILD HAS TWO PIECES OF NEW LEARNING--THE SKILL BEING TAUGHT AND THE TASK USED FOR PRACTICE.

WORKING WITH HANDICAPPED LEARNERS, ONE MUST INSURE THAT PRACTICE ACTIVITIES:

1. ARE ADEQUATE TO LEAD TO SKILL PROFICIENCY;
2. ARE RELEVANT TO THE SKILL BEING TAUGHT; AND
3. CAN BE PERFORMED BY THE CHILD INDEPENDENTLY.

I'D LIKE YOU NOW TO READ ANOTHER SELECTION FROM INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED AND COMPLETE A STUDY GUIDE ON THE MATERIAL. START AT THE BOTTOM OF PAGE 71 AND READ THROUGH PAGE 77. ALSO, THE FORM ON PAGE 82 MIGHT BE USEFUL WHEN YOU'RE ANALYZING THE PRACTICE ACTIVITIES IN A COMMERCIAL MATERIAL. YOU WILL HAVE 30 MINUTES FOR THIS TASK.

PASS OUT HANDOUT 2 (H-2)

AFTER 30 MINUTES, GO OVER THE ANSWERS WITH PARTICIPANTS.

SHOW TRANSPARENCY 3 (T-3)

FINALLY, WHEN YOU ARE UNABLE TO USE OR MODIFY COMMERCIALLY MADE MATERIALS, YOU ARE REQUIRED TO MAKE INSTRUCTIONAL MATERIALS FOR THE INDIVIDUAL NEEDS OF THE LEARNER.

SHOW TRANSPARENCY 4 (T-4)

GO OVER POINTS.

IN CONSIDERING THESE POINTS YOU WILL WANT TO REMEMBER THAT IF THE CONSTRUCTED MATERIALS ARE NOT BASED ON SPECIFIC OBJECTIVES MATCHED TO THE LEARNER NEEDS, THEY BECOME ONLY ACTIVITIES AND

NOT INSTRUCTIONAL ACTIVITIES DESIGNED TO BE EDUCATIONALLY BENEFICIAL.

THREE MAJOR COMPONENTS TO CONSIDER WHEN CONSTRUCTING THESE MATERIALS ARE TASK, FEEDBACK, AND PHYSICAL CHARACTERISTICS OR FORMAT. WE HAVE DISCUSSED TASK SOMEWHAT BY EMPHASIZING THE NEED FOR THE MATERIAL TO BE BASED ON SOUND INSTRUCTIONAL OBJECTIVES; TASKS INCLUDE RECALL, MATCH, RECOGNITION, IDENTIFICATION, DISCRIMINATION, CLASSIFICATION, AND APPLICATION.

FEEDBACK IS EQUALLY IMPORTANT. STUDENTS NEED TO KNOW IMMEDIATELY IF THE TASK HAS BEEN PERFORMED CORRECTLY, PARTICULARLY IF THE TASK IS PERFORMED INDEPENDENTLY. SOME METHODS OF FEEDBACK INCLUDE ANSWER SHEETS NUMBERED TO MATCH TASK SHEETS FOR SELF-CORRECTION, CORRECT ANSWERS ON BACKS OF TASK CARDS, AND PUZZLES THAT DO NOT FIT UNLESS THE ANSWER IS CORRECT.

FORMAT INCLUDES SIZE AND SHAPE, COLOR AND CONTRAST, LETTERING AND ILLUSTRATIONS. UNIQUE SHAPES (PUZZLES AS ANIMALS, ETC.) MAY MAKE THE GAME INTERESTING FOR SOME STUDENTS BUT BE DISTRACTING FOR OTHERS. EXTREMELY BRIGHT DOMINANT COLORS MAY HAVE AN IRRITATING EFFECT ON SOME STUDENTS. SOME LOW-CONTRAST COLORS (BLACK OR PURPLE) MAY BE DIFFICULT TO READ. LETTERS AND ILLUSTRATIONS SHOULD BE CLEAR, LEGIBLE, AND NEAT--NOT FADED PURPLE DITTO SHEETS.

THERE ARE MORE CONSIDERATIONS WHEN MAKING GAMES FOR INSTRUCTIONAL USE WHICH CAN BE COVERED IN "MAKE IT AND TAKE IT" WORKSHOPS AVAILABLE AT YOUR SCHOOL. YOU MAY ALSO BE ABLE TO USE SOME OF THE RESOURCES LISTED ON THIS HANDOUT FOR CREATING YOUR OWN MATERIALS.

IMPLEMENTING THE IEP:
SELECTING AND MATCHING MATERIALS FOR TEACHING

PASS OUT HANDOUT 3 (H-3-5)

IMPLEMENTING THE IEP:

SELECTING AND MATCHING MATERIALS

HANDOUT 1

Study Guide

1. List similarities between regular and special education students when using curriculum material.

2. The two steps which occur in the selection and evaluation of materials are:

3. With which type of material is it appropriate to use the evaluation tool?

4. What do you consider to be the advantage of evaluating material by the teacher prior to purchase?

HANDOUT 2

Study Guide

1. Why does a handicapped learner need more practice activities?

2. What three factors should be considered in selecting practice exercises?

3. Why are independent student activities necessary?

4. Why is teacher-to-student feedback important?

IEP IMPLEMENTATION:

SELECTING AND MATCHING MATERIALS

HANDOUT 3

Trudy Comba, Ph.D.
Boise State University

H-3

RESOURCES FOR CREATING MATERIALS

Active Learning Games to Enhance Academic Abilities, by Bryant J. Cratty
Prentice-Hall, Inc.
Englewood Cliffs,
NJ 07632

Change for Children, by Sandra Wina Kaplan, Jo Ann Butom Kaplan, Sheila Kunishima Madsen, Bette K. Taylor.
Goodyear Publishing Company, Inc.
15113-15 Sunset Blvd.
Pacific Palisades, CA 90272

Creative Art for the Developing Child, by Clare Cherry
Lear Siegler, Inc./Fearon Publishers
6 Davis Drive
Belmont, CA 94002

Creative Math Experiences for the Young Child, by Imogene Forte and Joy MacKenzie.
Incentive Publications Inc.
P.O. Box 12522
Nashville, TN 37212

Deal Me In! by Margie Golick
Jeffrey Norton Publishers
145 East 49th Street
New York, N.Y. 10017

Fresh Teaching Ideas for Teaching Reading
California Reading Association
3400 Irvine, Suite 211
Newport Beach, CA 92660

Games (and how to play them)
Thomas Y. Crowell
666 5th Avenue
New York, N.Y. 10003

I Saw a Purple Cow, by Ann Cole, Carolyn Faas, Faith Bushnell, and Betty Weinberger
Little, Brown and Company
200 West Street
Waltham, MA 02154

Ideas for Learning Centers, by Elaine Monte and Jerri Greenlee
Lear Siegler, Inc./Fearon Publishers
6 David Drive
Belmont, CA 94002

Ideas for Reading Learning Centers
California Reading Association
3400 Irvine, Suite 211
Newport Beach, CA 92660

IMPLEMENTING THE IEP:
SELECTING AND MATCHING MATERIALS

Igniting Creative Potential
Belia Viste School Project Implode
2141 East 7000 South
Salt Lake City, UT 84121

Instructional Development for Training Teachers of Exceptional Children,
BY Sivasailam Ibiagarsjan, Dorothy S. Semmel, and Melvyn I. Semmel
Indiana University Press
10th and Morton Streets
Bloomington, IN 47401

Learning Centers, by Louise F. Wayant, and Robert M. Wilson
The Instructo Corporation
Cader Hollow and Matthews Road
Paoli, PA

Learning Centers: Children on Their Own, by Virginia Rapport, ed.
The Association for Childhood Education International
3615 Wisconsin Avenue, N.W.
Washington, D.C. 20016

Reading Readiness Games and Activities, by Linda Wong
S-T-E-P Ahead, Inc.
1231 Olive Street
Eugene, OR 97401

Reading Skill Games Book I: Short Vowels, by Linda Wong
S-T-E-P Ahead, Inc.
1231 Olive Street
Eugene, OR 97401

Reading Skill Games Book II: Word Attack and Comprehension, by Linda Wong
S-T-E-P Ahead, Inc.
1231 Olive Street
Eugene, OR 97401

Reading Skill Games Book III: Long Vowels, by Linda Wong
S-T-E-P Ahead, Inc.
1231 Olive Street
Eugene, OR 97401

Recipes for Art and Craft Materials, by Helen Roney Sattler
Lee and Shepard Company
105 Madison Avenue
New York, N.Y.

Science Experiments You Can Eat, by Vicki Cobb
J.B. Lippincott Company
East Washington Square
Philadelphia, PA 19105

Snips and Snails and Walnut Whales, by Phyllis Fiarotta
Workman Publishing Company
231 East 51st.
New York, N.Y. 10022

IEP IMPLEMENTATION:
SELECTING AND MATCHING MATERIALS

Sticks and Stones and Ice Cream Cones, by Phyllis Fiarotta
Workman Publishing Company
231 East 51st
New York, N.Y. 10022

The Big Book of Collections: Math Games and Activities
Goodyear Publishing Company
15113-15 Sunset Blvd.
Pacific Palisades, CA 90272

The Zoom
Random House
201 East 50th Street
New York, N.Y.

Things to Make for Children
Lane Magazine and Book Company
Menlo Park, CA 94025

Word Lists for Reading Skills by Linda Wong
S-T-E-P Ahead, Inc.
1231 Olive Street
Eugene, OR 97401

Workjobs, by Mary Baratta Lorton
Addison-Wesley Publishing Company
Jacob Way
Reading, MA 01867

Young Child Experiences
Goodyear Publishing Company
15113-15 Sunset Blvd.
Pacific Palisades, CA 90272

ANSWER SHEET FOR HANDOUT I

1. List similarities between regular and special education students when using curriculum materials:

   a. Both profit from materials with good designs.
   b. Both profit from well-organized materials.
   c. Both profit from teacher instruction in concept usage and skill performance.
   d. Both profit from appropriate practice materials.

2. The two steps which occur in the selection and evaluation of materials are:

   a. Selection of materials for a target population.
   b. Selection of materials for an individual learner.

3. With which type of material is it appropriate to use the evaluation tool?

   Sequentially-based materials

4. What do you consider to be the advantage of evaluating material by the teacher prior to purchase?

LEARNER CHARACTERISTICS FOR MATERIALS MATCH

1. DOES THE INSTRUCTIONAL MATERIAL MATCH THE LONG-TERM GOAL SELECTED?
2. DOES THE LEARNER HAVE THE REQUISITE ENTRY BEHAVIORS DEMANDED FOR SUCCESSFUL PERFORMANCE IN THE MATERIAL?
3. IS THE MATERIAL COMPATIBLE WITH THE LEARNER'S AGE, GRADE, AND INTERESTS?
4. ARE THE PHYSICAL CHARACTERISTICS OF THE MATERIALS COMPATIBLE WITH THE LEARNER?
5. DOES THE MATERIAL INCORPORATE MOTIVATIONAL DEVICES THAT WILL CAPTURE AND MAINTAIN THE INTEREST OF THE LEARNER?
6. IS THE FORMAT COMPATIBLE WITH LEARNER NEEDS AND DOES IT FIT THE NEEDS OF THE CLASSROOM?
7. DOES THE INSTRUCTIONAL TIME DEMANDED OF THE MATERIAL MEET THE TIME ALLOTTED IN THE CLASSROOM?
8. DOES THE TEACHER HAVE THE NECESSARY EXPERTISE AND TRAINING TO SUCCESSFULLY USE THE MATERIAL?

SELECTING AND MATCHING MATERIALS

ANSWER SHEET FOR HANDOUT 2

1. Why does a handicapped learner need more practice activities?

   To develop retention of subject matter.

2. What three factors should be considered in selecting practice exercises?

   a. Activities are adequate to lead to skill proficiency.
   b. They are relevant to the skill bein taught.
   c. They can be performed by the child independently.

3. Why are independent student activities necessary?

   They develop proficiency and mastery in the student and allow the teacher to work with others.

4. Why is teacher-to-student feedback important?

   It reinforces the student for correct answers and prevents practice of errors.

DESIGNING TEACHER-MADE MATERIALS

1. WHAT WILL THE MATERIAL BE DESIGNED TO TEACH?
2. IS THE OBJECTIVE OF THE MATERIAL TO PROVIDE DRILL AND PRACTICE OR TO REVIEW AND TEST?
3. WHAT MUST THE LEARNER ALREADY KNOW OR BE ABLE TO DO IN ORDER TO USE THE MATERIAL?
4. WILL THE MATERIAL MOTIVATE THE CHILD?
5. WILL IT ACTIVELY INVOLVE THE LEARNER?
6. WILL IT GIVE HIM FEEDBACK ABOUT HIS SUCCESS OR FAILURE?

IMPLEMENTING THE IEP:
DETERMINING HOW TO TEACH SKILLS

IMPLEMENTING THE IEP:

DETERMINING HOW TO TEACH SKILLS

USAGE SUMMARY

Purpose: To develop specific teaching techniques to facilitate student learning.

Objectives: Upon completion of this module, the participant will be able to:

-identify the three stages in learning a new skill or concept

-match instructional techniques to each stage of learning a new skill by identifying two kinds of teaching activities that occur in the classroom, and give examples of each.

-demonstrate (in simulation) direct teaching techniques by employing correctly:

a. attention getting
b. task presentation
c. correction
d. reinforcement

-design and implement student activities to be used in the reinforcement of a previously taught task.

Materials: 5 x 7 cards and felt-tipped pens for each participant.
handouts 1-2
transparencies 1-2

Time: 1 hour, 45 minutes

PRESENTATION OUTLINE

I. Participants experience a difficult task

II. Determine the stage of the skill to be taught in relationship to the learner.

   A. Initial acquisition stage: the student receives instruction on how to do a task, gains some knowledge, and has minimal use of the skill

   B. Proficiency stage: child improves rate and accuracy

   C. Maintenance stage: student is proficient and engages in ongoing practice to maintain skill

III. Basic types of teaching activities

   A. Direct teacher activities are used during acquisition:

      1. provide instruction on how to perform the skill

      2. provide supervised practice on new skills

      3. provide corrective feedback on performance

   B. Independent child activities are used during proficiency and maintenance:

      1. activities provide equivalent or analogous practice

      2. teach independence for task completion

      3. develop child-directed work habits

      4. provide feedback for responses made

      5. utilize learning centers, peer tutoring, etc.

IV. Demonstration of and reading on direct teaching

   A. Modeling

   B. Shaping

   C. Drill - routine and novel

PRESENTATION OUTLINE (cont.)

D. Slicing back

E. Positive reinforcement - tangible

F. Positive reinforcement - social

G. Positive reinforcement - token

H. Contingency contracting

I. Ignoring inappropriate behavior

J. Punishment

K. Time out

V. TASK: The group will divide into pairs consisting of one teacher and one student. Try cards again with the teacher designing a teaching sequence. Read handouts and fill out study sheet, then teach/practice task (30 minutes).

SPECIAL NOTE TO TRAINER

Be sure to read carefully the assigned reading from Instructional Materials for the Mildly Handicapped (pp. 52-58) before teaching this module.

SCRIPT TEXT

TO BEGIN THIS MODULE ON DETERMINING HOW TO TEACH SKILLS, I'M GOING TO ASK YOU TO PARTICIPATE IN AN ACTIVITY. I HAVE A 5 x 7 CARD AND A FELT-TIPPED PEN FOR EACH OF YOU.

PASS OUT MATERIALS

HOLD THE CARD ON YOUR FOREHEAD WITH ONE HAND AND WITH THE OTHER HAND PLEASE WRITE THE WORD "OZONE" IN CAPITAL LETTERS, BACKWARDS ON THE CARD.

ALLOW A FEW SECONDS TO COMPLETE THE TASK. DO NOT GIVE ANY FURTHER INSTRUCTIONS.

IF YOU'RE FINISHED, LOOK AT YOUR CARD. HOW DID YOU DO? HOW MANY OF YOU GOT EVERY LETTER CORRECT? WERE YOU A LITTLE FRUSTRATED?

HOPEFULLY, THIS ACTIVITY HAS ILLUSTRATED THE FRUSTRATION STUDENTS IN YOUR CLASSROOM MIGHT EXPERIENCE WHEN THEY ARE PRESENTED WITH A NEW OR DIFFICULT TASK.

THERE ARE BASICALLY TWO DIFFERENT TYPES OF TEACHING ACTIVITIES THAT OCCUR IN THE CLASSROOM: DIRECT-TEACHER ACTIVITIES AND INDEPENDENT-CHILD ACTIVITIES. USING DIRECT-TEACHING, THE TEACHER GIVES INSTRUCTION THROUGH EXPLAINING OR

DEMONSTRATING A SKILL OR CONCEPT. INDEPENDENT-CHILD ACTIVITIES ARE THOSE ACTIVITIES IN A CLASSROOM WHICH STUDENTS PERFORM INDEPENDENTLY.

WHAT TYPE OF INSTRUCTION DID I USE IN THE OZONE ACTIVITY?

PROMPT FOR "INDEPENDENT"

WHY WAS THAT METHOD INAPPROPRIATE?

IF PARTICIPANTS DON'T COME UP WITH REASONS, SUGGEST THE FOLLOWING: IT WAS A NEW SKILL; NO INPUT ON HOW TO PERFORM IT.

THIS LEADS US TO THE IDEA THAT THERE ARE CERTAIN STAGES IN LEARNING WHICH CORRESPOND TO THE APPROPRIATE TEACHING TECHNIQUES. LOWENBRAUN AND AFFLECK (1976) SUGGEST THAT A CHILD PASSES THROUGH THREE STAGES OF ACQUISITION IN LEARNING A NEW SKILL OR CONCEPT: INITIAL ACQUISITION, PROFICIENCY AND MASTERY.

IN THE INITIAL ACQUISITION STAGE, THE STUDENT RECEIVES INPUT INTO HOW TO PERFORM THE BEHAVIOR AND GAINS SOME KNOWLEDGE AND MINIMAL USAGE OF THE SKILL. THE "DIRECT-TEACHER" APPROACH SHOULD BE USED DURING ACQUISITION. SOME DIRECT-TEACHING ACTIVITIES ARE MOLDING (ACTUALLY GUIDING THE STUDENT'S RESPONSE PHYSICALLY), DEMONSTRATION, VERBAL EXPLORATION, USE OF MEDIA OR VISUAL AIDS, AND CLOSELY-SUPERVISED PRACTICE. SUCH ACTIVITIES ALLOW FOR IMMEDIATE FEEDBACK TO STUDENTS TO

ASSIST THEM IN MAKING CORRECT RESPONSES AND TO PREVENT THEM FROM PRACTICING ERRORS.

IN THE PROFICIENCY STAGE, THE STUDENT IMPROVES THE RATE OF PERFORMANCE AND ACCURACY OF THE SKILL. AT THIS POINT, THE STUDENT HAS AN IDEA ABOUT HOW TO USE THE SKILL, SO THE TEACHER MUST BE CONCERNED WITH PROVIDING PLENTY OF PRACTICE AND DRILL TO INCREASE ACCURACY AND PERFORMANCE. WHEREAS IN INITIAL ACQUISITION, THE STUDENT NEEDS SUPERVISED PRACTICE, THE PROFICIENCY STAGE ALLOWS FOR INDEPENDENT-STUDENT PRACTICE.

ONCE THE STUDENT HAS REACHED THE DESIRED LEVEL OF PROFICIENCY, THE MAINTENANCE STAGE IS ENTERED. TEACHERS SHOULD ALLOW FOR ONGOING PRACTICE OF THE SKILL TO INSURE RETENTION. INDEPENDENT STUDENT ACTIVITIES ALLOW THE TEACHER TIME TO WORK WITH OTHER STUDENTS IN DIRECT INSTRUCTION ACTIVITIES. INDEPENDENT ACTIVITIES INCLUDE DRILL, EXTENDED TASKS, LEARNING CENTER ACTIVITIES, AND PEER TUTORING. ACTIVITIES AT THIS LEVEL SHOULD INSURE SUCCESS, AND THE STUDENT SHOULD STILL RECEIVE FEEDBACK FOR GROWTH AND REDUCTION OF ERRORS. FEEDBACK CAN INCLUDE SELF-CHECKING EXERCISES, CORRECTION KEYS, PEER CHECKING OF OTHERS' WORK, AND TEACHER CORRECTION.

SHOW TRANSPARENCY 1 (T-1)

THIS TRANSPARENCY ILLUSTRATES APPROPRIATE OBJECTIVES WHICH CORRESPOND TO THE THREE STAGES OF LEARNING. EACH OBJECTIVE SHOULD CONTAIN A CRITERION OF MASTERY THAT INDICATES WHEN A STUDENT HAS REACHED THE DESIRED LEVEL OF PROFICIENCY.

I AM SURE THAT MANY OF YOU ARE AWARE OF THESE INDEPENDENT STUDENT ACTIVITIES AND PROBABLY USE THESE TECHNIQUES FREQUENTLY. NOT AS MANY OF YOU ARE PROBABLY AWARE OF THE TECHNIQUES THAT I MENTIONED PREVIOUSLY--DIRECT TEACHING--SOMETIMES CALLED DIRECT INSTRUCTIONAL TECHNIQUES. MANY OF US RELY ON TECHNIQUES THAT WERE USED ON OURSELVES--MAINLY LECTURE AND SOME DEMONSTRATION. FEW TEACHERS ABOVE THE THIRD GRADE, WITH THE EXCEPTION OF PE, SHOP, AND SCIENCE, USE THE TECHNIQUES OF MOLDING (PHYSICALLY GUIDING THE ACTION) AND CORRECTION PROCEDURES.

I WOULD LIKE TO PROVIDE MODELS OF 2 KINDS OF TEACHING TECHNIQUES, ONE THAT IS COMMONLY USED AND ONE THAT MAY BE BETTER BUT IS USED LESS FREQUENTLY.

THIS IS THE TECHNIQUE THAT IS OFTEN USED:

"TODAY WE ARE GOING TO TALK ABOUT WORMBOGS. DOES ANYBODY KNOW WHAT A WORMBOG IS?"

ASK SEVERAL OF THE PARTICIPANTS TO GUESS. WHEN THEY GIVE AN ANSWER, PRAISE THEM BY SAYING, "THAT'S NOT QUITE RIGHT, BUT IT'S A GOOD TRY. ANYBODY ELSE?"

AFTER SEVERAL PEOPLE HAVE TRIED, SAY,

"I'LL GIVE YOU A CLUE: SOMETIMES A WORMBOG BEGINS WITH A CAPITAL LETTER. NOW, WHAT DO YOU THINK IT IS?"

ALLOW FOR SEVERAL MORE RESPONSES, THEN SAY,

"A WORMBOG IS A PART OF SPEECH AND USUALLY NAMES A PERSON, PLACE, OR THING. NOW, WHAT IS A WORMBOG?"

ALLOW FOR THE CORRECT RESPONSE.

"YOU HAVE IT. NOW WE ARE GOING TO DO A WORKSHEET AND UNDERLINE SOME WORMBOGS."

THIS PRESENTATION, THOUGH EXAGGERATED, IS VERY SIMILAR TO THE USUAL CLASSROOM PRESENTATION OF NEW CONCEPTS. IT ALLOWS FOR MUCH MISINFORMATION, PRACTICE OF ERRORS, AND LITTLE REPETITION OF CORRECT ANSWERS.

I WILL NOW ILLUSTRATE DIRECT TEACHING.

"IS EVERYBODY LISTENING?"

WAIT UNTIL EVERYBODY IS LISTENING AND HAS EYE CONTACT WITH THE PRESENTER; REINFORCE THOSE WHO ARE ATTENDING TO SHAPE THOSE WHO ARE INATTENTIVE.

"TODAY WE ARE GOING TO TALK ABOUT WHAT EVERY LIVING THING NEEDS TO STAY ALIVE.

LISTEN: EVERY LIVING THING NEEDS FOOD, WATER, OXYGEN, AND PROPER TEMPERATURE TO STAY ALIVE.

SAY THAT WITH ME: EVERY LIVING THING NEEDS FOOD, WATER, OXYGEN, AND PROPER TEMPERATURE TO STAY ALIVE.

AGAIN: EVERY LIVING THING NEEDS FOOD, WATER, OXYGEN, AND PROPER TEMPERATURE TO STAY ALIVE."

CALL ON A PARTICIPANT.

"WHAT DOES EVERY LIVING THING NEED TO STAY ALIVE?"

IF THE RESPONDENT DOESN'T GET ALL FOUR, THE PRESENTER REPEATS THE WHOLE SENTENCE, THEN ASKS THE SAME RESPONDENT TO ANSWER THE QUESTION AGAIN. IF THE RESPONDENT DOES THE SEQUENCE CORRECTLY, PRAISE HIM/HER AND CALL ON OTHERS TO REINFORCE THE STATEMENT.

"DO ALL LIVING THINGS NEED SUNSHINE TO STAY ALIVE?"

RESPONSE SHOULD BE NO.

"ALL LIVING THINGS NEED FOOD, WATER, OXYGEN, AND PROPER TEMPERATURE TO STAY ALIVE."

PASS OUT HANDOUT 1 (H-1)

IN MODELING THIS TECHNIQUE THERE WERE SEVERAL NECESSARY COMPONENTS:

(1) GAIN THE ATTENTION OF THE LEARNER; USE CUES, AUDITORY AND/OR VISUAL; VERBAL REINFORCEMENT FOR ATTENDING TO SIGNALS
(2) PRESENT THE OBJECTIVE TO BE LEARNED; TEACH DIRECTLY THE DESIRED SKILL; DEMONSTRATE THE APPROPRIATE RESPONSE
(3) ELICIT STUDENT RESPONSES
(4) PROVIDE REINFORCEMENT FOR CORRECT RESPONSES
(5) USE ERROR CORRECTION PROCEDURE IF RESPONSE IS WRONG
(6) PROVIDE OPPORTUNITY FOR PRACTICE
(7) SUMMARIZE TASK PRESENTATIONS

THIS CONCEPT OF DIRECT INSTRUCTION IS NOT NEW. MANY TEACHERS EMPLOY ALL OR PART OF THE DIRECT TEACHING PROCEDURES. THIS IS MERELY A WAY OF ORGANIZING TEACHING TECHNIQUES IN A MANNER THAT INSURES A CLEAR PRESENTATION OF MATERIALS AND A REDUCTION OF ERRORS. IT REDUCES MISLEARNING FOR THE STUDENT.

NOW, PLEASE SPEND ABOUT 15 MINUTES INDEPENDENTLY READING PP. 52-58 IN INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED. THIS WILL PROVIDE YOU MORE DETAIL ON THE COMPONENTS OF DIRECT INSTRUCTION.

NOW, LET'S GO BACK TO YOUR HANDWRITING SKILLS. ONE OF YOU WILL BE THE TEACHER AND ONE THE STUDENT. THE TEACHER WILL OBSERVE AS THE STUDENT ATTEMPTS TO WRITE THE WORD AGAIN. THE TEACHER SHOULD THEN DEVELOP AN INSTRUCTION PLAN TO ASSIST THE STUDENT IN WRITING OZONE. TRY TO EMPLOY DIRECT INSTRUCTIONAL TECHNIQUES IF THE STUDENT IS AT THE ACQUISITION STAGE OF LEARNING. IF THE STUDENT HAS MASTERED THE BASIC MOVEMENTS, THEN THE TEACHER SHOULD PROVIDE APPROPRIATE PRACTICE ACTIVITIES.

IF PARTICIPANTS HAVE DIFFICULTY WITH THIS TASK, MODEL IT WITH ONE OF THEM, THEN LET THEM TRY AGAIN. ALLOW 10 MINUTES.

AS A FINAL REFRESHER ON THE TECHNIQUES OF DIRECT INSTRUCTION, I'D LIKE YOU TO WORK IN THE SAME PAIRS TO COMPLETE THIS STUDY GUIDE.

PASS OUT HANDOUT 2 (H-2)

ALLOW 10 MINUTES TO COMPLETE THE STUDY GUIDE.

SHOW TRANSPARENCY 2 (T-2)

GO OVER ANSWERS WITH PARTICIPANTS.

IMPLEMENTING THE IEP:
DETERMINING HOW TO TEACH SKILLS

DO YOU FEEL THAT YOU LEARNED ENOUGH ABOUT DIRECT INSTRUCTION THAT YOU MIGHT BE ABLE TO USE IT IN CLASS? WHAT OTHER INFORMATION DID YOU GAIN FROM THIS MODULE THAT YOU MIGHT BE ABLE TO USE?

ALLOW FOR A SHORT DISCUSSION.

HANDOUT I

COMPONENTS OF DIRECT TEACHING

1. Gain attention of learner; use cues, auditory and/or visual; use verbal reinforcement for attending to signals.
2. Present the objective or material to be learner; teach directly the desired skill; demonstrate the appropriate response.
3. Elicit student responses.
4. Provide reinforcement for correct responses.
5. Use error correction procedures if response is wrong.
6. Provide opportunity for practice.
7. Summarize task presentations.

HANDOUT 2

STUDY SHEET FOR TEACHING PROCEDURES AND LEARNING PATTERNS

1. When teaching the academic tool subject skills, the most appropriate presentation format is ___________ group instruction.

2. Direct instruction has three basic components:
   a.
   b.
   c.

3. Direct teacher input has three critical elements:
   a.
   b.
   c.

4. What procedures improve the quality of student responses and practice during instruction?
   a.
   b.
   c.

5. The teacher needs to provide feedback concerning performance to ______________ the effectiveness of instruction and practice.

6. The presentation method of teaching learning would be appropriate when the student is in the _______________ stage of learning.

7. The independent and interaction methods of learning are appropriate for the _____________________________ stages of learning.

OBJECTIVES TO ILLUSTRATE LEARNING STAGES

TERMINAL OBJECTIVE:

JANE WILL APPROPRIATELY INTERACT WITH TEACHERS AND PEERS DURING FREE TIME.

ACQUISITION:

DURING FREE TIME, JANE WILL OBSERVE WHAT THE OTHER STUDENTS ARE DOING FOR 5 MINUTES OF THE 15-MINUTE TIME PERIOD.

PROFICIENCY:

DURING FREE TIME, JANE WILL WALK TOWARD THE GROUP AND INITIATE A VERBAL CONTACT WITHIN 5 MINUTES AFTER THE PERIOD STARTS.

MAINTENANCE:

DURING FREE TIME, JANE WILL BE ENGAGED IN CONVERSATION WITH AT LEAST TWO OTHER STUDENTS FOR PERIODS OF NO LESS THAN 5 MINUTES EACH.

ANSWER SHEET FOR STUDY SHEET ON TEACHING PROCEDURES

1. When teaching the academic tool subject skills, the most appropriate presentation format is small group instruction

2. Direct instruction has three basic components:
   a. direct teacher input
   b. student response
   c. teacher feedback on performance

3. Direct teacher input has three critical elements:
   a. gain attention of the learner
   b. directly teach the desired skill
   c. break instruction into small logical steps

4. What procedures improve the quality of student responses and practice during instruction?
   a. provide input before demanding the response
   b. attempt to reduce errors
   c. provide adequate amounts of practice under supervision

5. The teacher needs to provide feedback concerning performance to maximize the effectiveness of instruction and practice.

6. The presentation method of teaching learning would be appropriate when the student is in the acquisition stage of learning.

7. The independent and interaction methods of learning are appropriate for the proficiency and maintenance stages of learning.

IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

PROVIDING A CONDUCIVE ENVIRONMENT

USAGE SUMMARY

Purpose: Develop skills in classroom management and physical environment necessary for effective teaching.

Objectives: Upon completion of this module, the participants will:

-analyze individual teaching style and explain effect on student's learning

-design a physical environment indicating appropriate areas for direct teaching tasks, individual work space, and activity centers

-give rationale for learning centers (stations) where students can practice acquired skills

-utilize concepts of reinforcement and consequences, plan and implement a program designed to select maximum productivity from each student:

a. define effects of reinforcement and/or positive consequences on learning;

b. (in simulation) design a contingency contract system for student;

c. design and implement a system to decrease inappropriate behaviors.

Materials:

Transparencies 1-4

Handouts 1-11

Time: 1 hour, 45 minutes

PRESENTATION OUTLINE

I. Components of a conducive learning environment
    A. Teaching style/learning style
    B. Physical environment
    C. Management skill--instructional and behavioral
    D. Task: Read, then analyze style

II. Physical arrangement of room
    A. Rationale for modifying room arrangement
    B. Task: Readings; design and share room

III. Management of instruction and behavior
    A. Rationale for flexibility
    B. Review of behavioral principles:
        1. Principles of managing behavior
        2. Cautions and reasons for using reinforcement vs. punishment
    C. Contingency contracting
        1. definition and examples of contingency contracting

IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

THERE ARE FOUR MAJOR COMPONENTS IN PROVIDING A PROPER LEARNING ENVIRONMENT FOR STUDENTS. THEY ARE:

1. TEACHING STYLE OF TEACHER
2. LEARNING STYLE OF STUDENT
3. PHYSICAL ENVIRONMENT
4. MANAGEMENT SKILLS OF THE TEACHER

WE WILL COVER THOSE FOUR VARIABLES IN THIS MODULE AND GIVE YOU AN OPPORTUNITY TO BETTER UNDERSTAND HOW THEY AFFECT THE LEARNING OF YOUR STUDENTS AND YOUR EFFECTIVENESS AS A TEACHER. LET'S TAKE A LOOK AT THOSE FOUR COMPONENTS:

SHOW TRANSPARENCY 1 (T-1)

NAME THE FOUR COMPONENTS.

TEACHERS AND LEARNERS EACH HAVE DISTINCT STYLES, AND SOME TEACHING STYLES MAY BE INCOMPATIBLE WITH THE WAYS SOME STUDENTS LEARN. WHILE THIS MAY SEEM TO BE A DISTRESSING DISCOVERY THERE ARE WAYS TEACHERS CAN ACCOMODATE TO THE LEARNING STYLES OF THEIR STUDENTS. BY EXAMINING AND UNDERSTANDING THE VARIOUS STYLES OF TEACHERS AND LEARNERS, YOU CAN DETERMINE THE SETTINGS IN WHICH YOUR STUDENTS WILL MAKE THE MOST GAINS.

PASS OUT HANDOUTS 1 & 2 (H-1-7)

THIS READING SETS FORTH SOME CHARACTERISTICS OF A NUMBER OF DIFFERENT TEACHER AND LEARNER STYLES. SPEND ABOUT 10 MINUTES LOOKING IT OVER, THEN USE HANDOUT 2 TO ANALYZE YOUR OWN STYLE. YOU MAY NOT FIT NEATLY INTO ONE STYLE - THAT'S FINE. TRY TO IDENTIFY WHERE YOUR PRIMARY CHARACTERISTICS FALL, THEN PINPOINT THE CHARACTERISTICS YOU "SOMETIMES" EXHIBIT.

ALLOW 15 MINUTES FOR ACTIVITY.

ASK SEVERAL PARTICIPANTS TO SHARE
THEIR PROFILES.

CAN ANYONE THINK OF A STUDENT YOU HAVE WHOSE LEARNING STYLE MAY CONFLICT WITH YOUR TEACHING STYLE? HOW ABOUT A STUDENT WHOSE STYLE YOU COMPLEMENT?

ALLOW FOR A FEW MINUTES OF DISCUSSION

LEARNING STYLES HAVE MANY VARIABLES IN ADDITION TO PREFERENCES FOR AUDITORY OR VERBAL INPUT, WHICH IS WHAT WE GENERALLY THINK OF. WE ALSO NEED TO THINK OF RATE OF LEARNING AND TASK COMPLETION, NEED FOR INTERACTION, REACTION TO STRUCTURE, PHYSICAL LIMITATIONS, AND TRANSIENT PROBLEMS, SUCH AS AN EMOTIONAL CRISIS OR ILLNESS.

PASS OUT HANDOUTS 3 & 4 (H-8-15)

THIS READING DISCUSSES WAYS YOU CAN VARY YOUR TEACHING STRATEGIES TO BETTER SUIT YOUR STUDENTS' NEEDS. AFTER YOU READ THE HANDOUT, COMPLETE THE TASK SHEET. WE WILL DISCUSS SOME OF YOUR PROGRAMMING SUGGESTIONS IN ABOUT 15 MINUTES.

ALLOW 15 MINUTES FOR ACTIVITY

CALL ON TWO OR THREE PARTICIPANTS TO DISCUSS THEIR PROGRAMMING SUGGESTIONS

ANOTHER COMPONENT OF THE CONDUCIVE ENVIRONMENT IS THE TOTAL PHYSICAL ENVIRONMENT, INCLUDING ROOM ARRANGEMENT, ACCESS TO INSTRUCTIONAL MEDIA, AND ALTERNATIVE INSTRUCTIONAL MATERIALS. IN IMPLEMENTING A SYSTEM OF INDIVIDUALIZED INSTRUCTION, YOU NEED TO INCORPORATE ACTIVITY CENTERS, SMALL GROUP AREAS, AND INDIVIDUAL AREAS INTO THE CLASSROOM.

SHOW TRANSPARENCIES 2 & 3 (T-2-3)

POINT OUT THE ACTIVITY, SMALL-GROUP AND INDIVIDUAL AREAS

I WOULD LIKE YOU TO DIVIDE INTO GROUPS OF THREE. EACH OF YOU WILL BE GIVEN A DIFFERENT READING, SO YOU MUST SHARE YOUR

INFORMATION. SPEND ABOUT TEN MINUTES READING, THEN USING THE SPECIFICATIONS ON HANDOUT 8 AND YOUR OWN CREATIVITY, DESIGN A CLASSROOM ARRANGEMENT. YOU WILL HAVE 20 MINUTES FOR YOUR DESIGN. BE PREPARED TO SHARE YOUR DESIGN AND RATIONALE FOR IT.

PASS OUT A PACKET OF HANDOUTS 5, 6, 7, & 8 TO EACH GROUP
(H-16-49)

ALLOW 30 MINUTES FOR ENTIRE ACTIVITY

ASK SEVERAL GROUPS TO SHARE THEIR DESIGNS AND EXPLAIN THEIR RATIONALE

NOW I WOULD LIKE YOU TO TAKE JUST A MOMENT AND WRITE DOWN ONE MODIFICATION YOU WOULD LIKE TO MAKE IN THE PHYSICAL ARRANGEMENT OF YOUR CLASSROOM WHEN YOU GET BACK. CHOOSE SOMETHING YOU FEEL WOULD MAKE THE LEARNING ENVIRONMENT MORE CONDUCIVE FOR YOUR STUDENTS.

ALLOW A FEW MINUTES OF SILENCE FOR PARTICIPANTS TO WRITE

THE 3 MANAGEMENT SKILLS OF THE TEACHER IS THE LAST COMPONENT WE WILL COVER IN THIS MODULE. THIS INVOLVES BOTH INSTRUCTIONAL PLANNING AND BEHAVIOR MANAGEMENT OF STUDENTS.

THE TRADITIONAL WAYS OF SCHEDULING A CLASS--DIVIDING THE DAY INTO DISCRETE TIME PERIODS FOR EACH SUBJECT--DO NOT ALWAYS

MEET THE NEEDS OF INDIVIDUAL CHILDREN. WE NEED TO CREATE FLEXIBLE SCHEDULING SO THAT ROUTINES ARE FAMILIAR AND REGULAR BUT TIME PERIODS ARE NOT RIGID. FLEXIBLE SCHEDULING ALLOWS STUDENTS TO WORK AT THEIR OWN RATES AND ALLOWS THE TEACHER THE OPPORTUNITY TO WORK WITH INDIVIDUALS AND SMALL GROUPS.

THE TECHNIQUES USED TO MANAGE THE BEHAVIOR OF STUDENTS CAN OFTEN MAKE THE DIFFERENCE BETWEEN A SUCCESSFUL EDUCATIONAL PROGRAM AND A FAILURE.

PASS OUT HANDOUT 9 (H-50-52)

THIS HANDOUT LISTS THIRTEEN PRINCIPLES OF MANAGING BEHAVIOR. IT MAY COME IN HANDY FOR REVIEW. THERE IS AN EXERCISE ON THE LAST PAGE WHICH YOU MIGHT WANT TO DO ON YOUR OWN TIME.

CONTINGENCY MANAGEMENT IS A SYSTEM IN WHICH BEHAVIORAL PRINCIPLES ARE APPLIED IN A CONSISTENT MANNER WHICH HAS BEEN DOCUMENTED TO INCREASE ACADEMIC AND SOCIAL GROWTH. CONTINGENCY MANAGEMENT INVOLVES SETTING CONTRACTS WITH INDIVIDUALS OR GROUPS OF STUDENTS FOR CERTAIN AMOUNTS OF WORK TO BE COMPLETED IN CERTAIN PERIODS OF TIME. THERE ARE MANY POSSIBLE MODIFICATIONS TO THE CONTINGENCY MANAGEMENT PROCESS.

BASIC TO OUR DISCUSSION, HOWEVER, IS THAT YOU DEVELOP AN AWARENESS OF WHAT REINFORCERS ALREADY EXIST IN THE STUDENT'S ENVIRONMENT. TOO OFTEN THE TERM BEHAVIOR MANAGEMENT IS LINKED WITH BRIBERY, TOKENS, AND M & M's. IT DOESN'T HAVE TO BE THAT WAY. THERE ARE MANY NATURALLY OCCURRING EVENTS IN A

STUDENT'S ENVIRONMENT THAT ARE REINFORCING WITHOUT USING TOKENS, ETC. SOMETIMES THESE PRIMARY REINFORCERS ARE NECESSARY. BUT NOT ON A REGULAR BASIS.

THE CRITICAL FACTOR IN USING BEHAVIOR MANAGEMENT PRINCIPLES IS WHEN THE REINFORCERS ARE USED AND HOW OFTEN. IF YOU WANT A STUDENT TO INCREASE A BEHAVIOR, REINFORCE IT IMMEDIATELY AFTER THE BEHAVIOR OCCURS; THIS PRINCIPLE APPLIES TO GOOD AND BAD BEHAVIORS.

GIVE EXAMPLES.

IF YOU WANT THE STUDENTS TO DECREASE A BEHAVIOR, IGNORE IT. IF YOU REINFORCE THE BEHAVIOR EVERY ONCE IN A WHILE, IT WILL CONTINUE TO OCCUR ON A REGULAR BASIS.

WE HAVE NOT DISCUSSED PUNISHMENT FOR SEVERAL REASONS. PUNISHMENT IS AN EFFECTIVE DETERRENT FOR INAPPROPRIATE BEHAVIOR, HOWEVER IT HAS SEVERAL SERIOUS SIDE EFFECTS: ESCAPE BEHAVIOR, FEAR, AND AVOIDANCE. IT HAS ALSO BEEN DOCUMENTED THAT THE STUDENT MAY NOT EXHIBIT THE BEHAVIOR IN THE PRESENCE OF THE PUNISHER, BUT WILL EXHIBIT IT AROUND OTHERS WHO HAVE NOT PUNISHED THE BEHAVIOR.

PASS OUT HANDOUTS 10 & 11 (H- 53-73)

IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

PLEASE SPENT ABOUT 15 MINUTES READING THIS HANDOUT ON CONTINGENCY CONTRACTING. WHEN YOU ARE FINISHED, COMPLETE THE STUDY GUIDE QUESTIONS.

SHOW TRANSPARENCY 4 (T-4)

GO OVER ANSWERS WITH PARTICIPANTS.

INTELLECTUALLY DIRECTED TEACHING AND LEARNING STYLES

"I THINK THEREFORE I AM"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from intellectually directed and motivated instructional situations.

MANIFESTATIONS:

TEACHER

- displays composure even in difficult circumstances
- may appear to be aloof
- demonstrates academic excellence
- reads widely
- spends daily time alone reading or working
- has few hobbies other than reading
- finds difficulty in planning with a team
- finds little or no difficulty with interpersonal conflicts
- is generally thought of as a quiet person
- tends to avoid impatience with students by setting short term, possible goals
- gives pop tests to see if students have read the material
- quotes authorities
- may be heard to say, "As Shakespeare said in *Measure for Measure*, . . .
- has a number of standard lectures (students pass the notes on from year to year)

LEARNER

- works alone much of the time
- reads well
- remains fairly quiet in groups
- rarely comes into conflict with other students
- rarely acts as a play leader on the playground
- may be heard to say, "May I go to the library?"
- involves himself/herself in few extracurricular activities
- avoids role play situations whenever possible
- handles long term assignments well
- persists in projects until they are completed
- may have one or two close friends but rarely runs with a group
- may zero in on an area of interest and read everything available on it
- may be content to be with a group without verbally participating
- is punctual

EMOTIONALLY DIRECTED TEACHING AND LEARNING STYLES

"EVERYTHING IS BEAUTIFUL IN ITS OWN WAY"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from emotionally and/or aesthetically directed and motivated instructional situations.

MANIFESTATIONS:

TEACHER

- displays materials and children's art and work in interesting, pleasing ways in the classroom
- displays a love of living things by caring for and leading students to care for plants and animals in the classroom
- displays a keen interest in the influences of environment by consciously arranging the classroom both for efficiency and beauty

LEARNER

- chooses art activities whenever possible
- demonstrates interest in caring for plants, animals in classroom
- demonstrates concentration and care in working on art/aesthetic projects
- demonstrates involvement in informal learning situations such as play situations, creative dramatics, spontaneous music groups

Excerptedfrom: Data bank guide learning styles. Mainstreaming Mildly Handicapped Students Into the Regular Classroom. Education Service Center, Region XIII, Austin, Texas, 1975 displays the same interest in the outdoor environment whenever possible by providing a pleasant play atmosphere for children

demonstrates a sense of humor in the way (s)he handles classroom crises, the way (s)he greets individual children, the way (s)he deals with trivia

tends to use role play and dramatic situations in instruction

may tend to show preference for the more aesthetic subjects (literature, art, music) by consistently shortening or cutting other subjects in a time squeeze

demonstrates the ability to motivate children but may not know where to begin to develop basic skills

may be heard to say, "Learning can be fun!"

participates in story swapping sessions; tells jokes well;

attends dramatic and/or musical performances and demonstrates interest in performing

demonstrates cooperation more than competition in approaching aesthetic projects

is not contest oriented

may be heard to say, "Did you hear the one about. . ."

may demonstrate interest in projects involving construction and design

may prefer periods of working alone on projects that involve the medium of his/her interest

seems to be sensitive and responsive to the environment (color, arrangement, objects)

METHODICAL, CAREFULLY STRUCTURED TEACHING AND LEARNING STYLES

"STEP BY STEP WITH AN END IN SIGHT"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from methodical, carefully structured instructional situations.

MANIFESTATIONS:

TEACHER	LEARNER
manages time well	is disturbed when the schedule is changed
stays on schedule	
divides work load into attainable goals	may be heard to say, "We're supposed to be having Math now."
tends not to use spontaneous, "teachable moments"	asks for specific instructions and directions; sometimes asks several times to be sure (s)he has them straight
sticks closely to lesson plans	
tends to reject student questions if they do not follow fairly closely the plans for the allotted topic	expresses greater sense of having learned when (s)he can provide specific answers to specific questions
does not have "extraneous" materials displayed and available in the classroom	may be heard to say, "Is this going to be in the test?"
seldom says, "Hey! that's a great idea!"	may be heard to say, "How many pages (or paragraphs) should it be?"
sometimes says, "That's related to tomorrow's considerations. Let's deal with that tomorrow."	sets attainable goals
accomplishes planned tasks	chooses possible ways to those goals
rarely procrastinates	may tend to have a difficult time working with diverse groups
innovates only cautiously and after much preparation	stays with the tried and true means to an end
	hesitates to experiment

ASSOCIATIVE, OPEN STRUCTURED TEACHING AND LEARNING STYLES

"AHA! LET'S SEE WHERE THIS PATH GOES"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from associatively processed and open ended structures in instructional situations.

MANIFESTATIONS:

TEACHER	LEARNER
has creative insights into effective ways to assist students	has a number of interests
tends to use spur-of-the-moment ideas	starts hobbies, may settle on one or two, or may flit from one to another
may tend to go off on tangents from basic plan	experiments continually
may allow class discussions to get off the point	enjoys puzzles, riddles, brain teasers
uses the "teachable moment"; tries to create the "teachable moment"	has potential in a number of areas; finds it confining to stay with one for long
may tend to start many projects, finish a few	contributes creatively to discussions, planning sessions, brainstorming sessions
has many interests	is usually late with assignments, especially written assignments or long term assignments
uses exploratory (or heuristic) methods of instruction frequently	procrastinates; produces for deadlines
changes goals as projects progress	finds organization in writing, carrying out a task quite difficult
sometimes begins innovations with insufficient preparation	is socially accepted and even sought as someone fun to be with
exhibits enthusiasm; communicates enthusiasm; inspires initial enthusiasm;	usually has well developed verbal skills
may be heard to say, "Tomorrow I'm going to get organized."	may be heard to say, "I'll write that paper tomorrow. How about a game of chess (or touch football or baseball or . . .)?
uses student input; depends on student input	

SINGLE SENSORY CHANNEL TEACHING AND LEARNING STYLES

"BEWARE THE MAN OF ONE BOOK"

DEFINITION: This learning and teaching style is characterized by preferee for and ability to benefit from instructional situations that employ a single sensory channel for instruction and learning.

MANIFESTATIONS:

TEACHER	LEARNER
uses primarily one sensory mode for instruction (reading OR writing OR filmstrips OR film OR video OR audiotape OR discussion OR lecture)	tends to choose the same media of instruction whenever possible (book, filmstrip, film, game, group project, art, etc.)
presents subjectgs via the chosen channel and they come out narrowly interpreted	demonstrates boredom or lack of interest when other media are used
finds difficulty in keeping the slow student motivated	tests poorly on material presented through media other than the preferred one
finds students often bored in his/her classes	demonstrates inadequate transfer of learning from one area to another

is sometimes frustrated with the superficiality of student responses

has had limited personal experience with other media

teacher the way he/she was taught

may be heard to say, "I have never seen such lazy students."

hesitates to cooperate in team teaching

can demonstrate proficiency in the chosen media

may be heard to say, "Do we *have* to do that?"

may occasionally demonstrate anger or hostility when pushed to perform in an area other than the one (s)he feels safe in

demonstrates agility and command within the area of familiarity

---

MULTIPLE SENSORY CHANNEL TEACHING AND LEARNING STYLES

"SCHOOL IS A MANY SPLENDORED THING"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from instructional situations that employ a variety of sensory channels or media for instructional purposes.

MANIFESTATIONS:

TEACHER

demonstrates ability to manipulate various media for instruction

demonstrates ability to incorporate a variety of sensory approaches during instruction

may be heard to say, "Sorry, I already have the Media Room reserved."

usually motivates many students because of the variety of his/her repertoire of motivational aids

may tend to depend heavily upon electronic media

demonstrates flexibility in moving among sensory approaches in instruction

tends to use the "teachable moment"

may tend to confuse some students with too much variety

tends to prefer open-ended structures along with a variety of sensory approaches

LEARNER

demonstrates interest in a variety of activities, mediums

uses effective social interactional skills: conversation, decision making in groups, group planning, etc.

demonstes ability to transfer learnings

may tend toward short attention span or short periods of concentration

may have difficulty staying with a task to completion

may be heard to say, "I'm tired of this. Let's go get a puzzle."

may find contracting difficult

may demonstrate superficial knowledge in a number of areas

learns best when a concept or skill is reinforced through multiple sensory activities

---

INDEPENDENT TEACHING AND LEARNING STYLES

"I WANT TO BE BY MYSELF"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from independent instructional situations.

MANIFESTATIONS:

TEACHER

does lesson and schedule planning alone, often at home

shows little interest in participating in teacher's teams, groups, or organizations

spends little time in the teacher's lounge

LEARNER

chooses to work in a carrell during independent activities

prefers quite for study

occasionally expresses impatience with group effort on a project; may say the group approach is a waste of time plans well in advance for classes, exams, school projects

changes plans with difficulty

reacts negatively to changes in school schedules

reacts negatively to interruptions in classes

organizes with ease

provides consistency for students; they know what to expect

submits reports, grades, records on time

tends to get a bit upset by boisterous group activity in class

has hobbies that require working alone; model cars or planes, art, reading, puzzles, or day dreaming

may be heard to say, "They don't like me." or "Gosh, they're dumb."

may demonstrate shyness through the body language of hostility

expresses preferences for specific assignments with clear goals and a set time in which to do it; demonstrates frustration at openended assignments

demonstrates ability to handle contracting

demonstrates hesitancy to participate in discussions, games, play

---

SOCIAL TEACHING AND LEARNING STYLES

"PEOPLE WHO NEED PEOPLE ARE THE LUCKIEST PEOPLE IN THE WORLD"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from instructional situations that involve social interaction.

MANIFESTATIONS:

TEACHER

prefers to plan with a team

prefers to teach with a team

contributes ideas freely in a group

LEARNER

chooses group projects over working alone

may be a playground leader

uses the support of the group to stay with a task

demonstrates difficulty in staying with a task alone

procrastinates when working alone

occasionally may tend to go along with the group rather than take a lone stand

may be heard to say, "Would you help me think through this project?"

may be active in teacher's groups and organizations

encourages and assists with occasional celebrations or social gatherings of school staff

particies easily and enthusiastically in play, games, sports

may demonstrate difficulty in "settling down" to quiet study

emonstrates more difficulty in getting started with a task than in staying with the task

may be heard to say, "Can we do the baseball game in Spelling today?"

benefits from informal learning situations; that is, learns decision making, social interactional skills, and thinking strategies from play and games

learns effectively by watching others

participates easily in group discussions

SLOWLY PACED TEACHING AND LEARNING STYLES

"THE TURTLE GETS PLACES BY STICKING ITS NECK OUT"

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from instructional planning pacing that is slower than average.

MANIFESTATIONS:

TEACHER

accomplishes tasks slowly but often with deliberate quality

LEARNER

works slowly

makes decisions about instruction only after long consideration

agonizes over grading

spends after school hours, evenings, and weekends on school work

may be heard to say, "I wish once, just once, I could say, 'I'm finished!'"

tends to let paper grading pile up; may not return student work at the optimum time

rarely finishes a task in the average time

may need directions repeated or given a step at a time

may be heard to say, "Just a minute, I'm not finished."

may demonstrate nervousness or frustration during tests, especially timed tests

may work with deliberate care

may tend to daydream

RAPIDLY PACED
TEACHING AND LEARNING STYLES

"W-H-I-SHHHHHHHHHH! — WHAT WAS THAT?

DEFINITION: This learning and teaching style is characterized by preference for and ability to benefit from instructional planning and pacing that is more rapid than the average.

MANIFESTATIONS:

TEACHER

accomplished tasks rapidly

makes quick decisions about instruction

may have to retrace steps because of decisions made too rapidly

tends to use trial and error method of approaching a task

prefers to get started with a task rather than spend much time planning

may be heard to say, "What are we waiting for? Let's go!"

is usually one of the first teachers ready in the Fall, packed up in the Spring

does not spend weekends on school work

hands in reports, paper work on or before the deadline

may tend to miss nuances and fine points in planning and reporting

has a number of interests outside of school work

LEARNER

works rapidly

may tend to make more errors than his/her ability dictates

dislikes proofreading, checking over work

is active in the classroom and on the playground

may be heard to say, "I'm finished; what do I do now?"

enjoys speed tests, timed contests

demonstrates intense if somewhat short attention span

prefers short term assignments

may demonstrate boredom with instructional methods that are slow, require passive student role

HANDOUT 2

"My Style"*

INTELLECTUALLY DIRECTED

( ) I read a great deal

( ) I think of myself as a quiet, introspective type person

( ) I mostly follow a number of standard lectures I have prepared on basic subjects

METHODICAL, CAREFULLY STRUCTURED

( ) I usually stay on schedule

( ) I accomplish tasks I have planned

( ) I tend to avoid "extraneous" materials

( ) I manage time well

SINGLE SENSORY CHANNEL

( ) I primarily use one sensory mode for instruction (e.g., lecture)

INDEPENDENT

( ) I prefer to do my planning alone

( ) I always plan in advance

( ) I don't like to change my plans or schedules

SLOW PACED

( ) I work slowly with deliberation

( ) I agonize over grading

( ) I spend after-school hours to finish school work

EMOTIONALLY DIRECTED

( ) I am more interested in the outdoors, plants, animals, etc.

( ) I think of myself as an extrovert

( ) I prefer the aesthetic subjects such as literature, art and music

ASSOCIATIVE, OPEN STRUCTURED

( ) I am quite spontaneous

( ) I often change my goals as project progress

( ) I often use exploratory methods of instruction

( ) I depend on much student input

MULTIPLE SENSORY CHANNEL

( ) I use a variety of print and media for instruction

SOCIAL

( ) I prefer to work with a team in planning

( ) I like teaching as a member of a team

( ) I may procrastinate when I am working alone

FAST PACED

( ) I accomplish tasks quickly

( ) I prefer to start a task rather than spend much time planning

( ) I hand in paperwork on or before the deadline

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*Adapted from the "Data bank of learning styles" from Mainstreaming mildly handicapped students into the regular classroom.

HANDOUT 3

RESPONDING STRATEGICALLY TO STYLE

There are infinite ways in which you may vary your teaching strategies to better suit your students' needs. The process is a creative, expansive one, but it can also be looked at systematically according to specific variables. This article will address strategy variables in terms of the specific learning style categories you have been working with (refer back to **Learning Styles Charts**). The variables are:

- varied *sensory channels* used to convey information (one sensory channel vs. several sensory channels)
- amount of *structure* built into the instructional process (methodical vs. associative/clear structure vs. open structure)
- *rate* at which student expected to learn and how to convey that expectation (pacing)
- types of *interactions* built into the instructional process (independent vs. social)

Each of the variables will be briefly discussed, with specific descriptions of how instructional strategies may be varied within those areas.

Sensory Channels

There are three main channels that are important for instructional purposes: visual, auditory, and haptic (motor, tactile). For a long time in education, most instruction emphasized the use of only two of the channels, and there was very limited use of those: the auditory channel was utilized through the lecture strategy, and the visual channel was utilized through the strategy of having students read materials. Then came an age of research and technology that made available many more materials and techniques for conveying information. Some have questioned this proliferation, saying that the use of varied materials and media is just a frill; others claim that it is essential.

Within the context of educating mildly handicapped students, the use of varied materials and media become an essential instructional variable. Some students definitely have some learning channel deficits or blocks, and instruction to them must be directed through their learning channel strengths in order for it to be effective.

Following is a chart that outlines a variety of resources and strategies that can be used to instruct through the various learning channels. In planning instruction, it is important to take advantage of the wide variety of ways each channel can be addressed, so that skills within the channel can be addressed, so that skills within the channel are enhanced and so that boredom does not creep into the instructional process.

Instructing Through the Various Learning Channels

VISUAL

Have students view visuals:
- bulletin boards
- banners
- posters
- transparencies
- slides
- films/filmstrips
- flashcards
- TV
- pictures
- graphs

Have students view/observe events:
- dramatic presentations
- role plays
- demonstrations
- experiments
- community situations
- animal behavior

Have students read:
- textbooks
- comic books
- pamphlets
- posters
- newspapers
- bulletin boards
- flash cards
- reports
- wall graffiti
- letters
- maps
- magazines
- riddles

AUDITORY

Have students listen to:
- radio
- records
- TV
- speeches
- lectures
- debates
- discussions
- interpretive readings
- concerts
- interviews
- audiotapes

Have students interact/verbalize through:
- oral report
- panel
- debate
- discussion
- brainstorm
- oral questions and answers
- round robin

HAPTIC

Have students touch/feel:
- objects
- textures
- temperatures
- weights
- lengths/distances
- pressures

Have students try/do/use:
- games
- experiments
- physical exercises
- manipulative materials
- pantomimes

Have students make/construct/draw:
- diorama
- collage
- scroll
- sand painting
- diary
- pictograph
- media presentation
- models
- timelines
- leaf prints
- paintings
- food
- clothing
- bulletin board
- banner
- graph
- word wall
- drawings
- slide show
- relief map
- mazes

Have students write/copy:
- problems
- letters
- shapes
- words

Just a few examples might help clarify how a concept or skill can be addressed with emphasis on different sensory channels. Let's take a skill in reading. You want the child to be able to discriminate between "sh" and "ch." Addressing this skill through the *visual channel*, you could have a picture of a chair and a picture of a shoe, with the appropriate letters written beneath them. Using the *auditory channel*, you could have the child listen and repeat the two sounds or listen to a tape recording and mark or in some other way indicate when she heard the "ch" sound and the "sh" sound. Using the *haptic channel*, you could have the child place his hand before his mouth and feel the difference in the air passage in saying the two sounds.

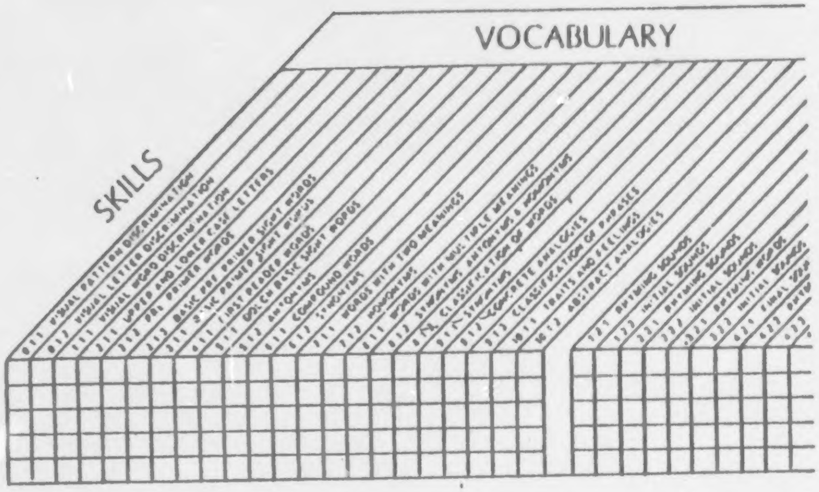
Yet another example. You want students to understand the concept of exclusion in groups. Using the *visual channel*, you could have them read stories with that theme, or view pictures that convey the idea and feeling. Using the *auditory channel*, you could have them listen to poems or essays, or engage in a discussion. Using the *haptic channel*, you could have them play a game where all but one or two of the students get in a circle and hold hands. Two students stand on the outside of the circle and try to force their way in; those holding hands try to keep them out, exclude them.

Structure

The amount of structure you build into instruction is related to two components: the end *goals* and the *process* for getting there.

Some students prefer to know exactly what is expected of them. To satisfy the needs of these students, you need to be able to show them the continua of goals and objectives they will be working toward. Ladders of skills, specified objectives, and tracking charts are satisfying to these students. It is quite effective if the students are allowed to be involved in keeping track of their own progress, by checking off completed objectives as they go. Some examples of ladders of skills, and specified objectives follow.

Ladder of Skills*



11.0 **Specified Objectives**

11.1.1 The learner will identify figures of speech and colloquial expressions. Given 20 sentences with underlined figures of speech or colloquial expressions and 20 meanings, the learner will select the correct meaning for each.

MINIMUM: 18 correct DATE OF COMPLETION:

11.2.1 The learner will use diacritical markings to determine the meaning of words. Given 20 incomplete sentences with 2 diacritically marked. words for each, the learner will complete each sentence.

MINIMUM: 18 correct DATE OF COMPLETION:

11.3.1 The learner will read paragraphs and identify words that persuade him toward a definite viewpoint. Given 2 paragraphs with underlined words in each, the learner will select the underllined words that persuade him.

MINIMUM: 18 correct DATE OF COMPLETION:

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*From: Systematic Approach to Reading Improvement, Phi Delta Kappa, Inc., P.O. Box 789, Bloomington, Indiana.

The learner will read a story and determine time relationships. Given a story, 5 incomplete sentences with 4 choices each, and 10 statements with 3 time relationship choices for each, the learner will select the correct answer for each.

MINIMUM: 18 correct DATE OF COMPLETION:

You will find that other students will feel confined by the notion that there are pre-established things they have to learn in spite of what their spontaneous inclinations and interests might be. These are the students who are likely to drop out of school because they see it as irrelevant to their own life path.

With these students, you would do better to plan cooperatively as you go. You will need to tread a careful balance in using this path between encouraging the student to learn those things that are essential to get along in life, and allowing the student to select his/her own goals and objectives, directly related to current interests.

Working with this type of student will call for frequent conference periods. An instructional format you could use would be that of mutual contracting. There are two important aspects to this process: you plan mutually with the student (allowing equal amounts of input from both), and you then formalize the understanding in writing. Figures 1 and 2 are examples of formalized contracts which allow for substantial amounts of student input.

Figure 1

Name ____________________________

Date ____________________________

LEARNING CONTRACT

1. Explain what it is that you would like to learn. (You may choose from the list given in class and/or you may suggest something else.) Be sure to include some idea of *how much* of it you wish to learn.

2. Try to explain what you expect to gain by learning this. What's the personal benefit of spending your time on this subject?

3. List below as many strategies (ways, methods, activities) which you might employ in order to learn what you have chosen. Put a star (*) next to the ways which seem best or most pleasant to you.

4. Is there some kind of product which you can produce which might be a good way of ending your study (a paper, play, painting, poem, lesson you would teach, etc.). Could you share your learning in some way with others in the class? List below.

5. In our school we have to give each student a grade at the end of each "marking period." In order to make this more fair, you can help by suggesting some criteria (standards) by which the teacher will be able to rate your learning. The teacher will help with this.

   Indicate what specific things the teacher should look for. Also, indicate what combination of things will earn an "A," "B," etc.

6. Some people work best when they have a deadline, and others work best without one. Which pleases you most?

   If you wish a deadline, set one here ________________________

   What penalties (if any) should there be if you do not meet your deadline?

7. Comments:

Student's Signature ________________________ Date ______________

Teacher's Signature ________________________

Figure 2

CONTRACT

My Wednesday contract is: To work on my health project	I will work: With Mary	I (was, was not) successful because: I finished the chart and wrote a paper explaining it.
My Thursday contract is: To read Huck Finn	I will work: By myself	I (was, was not) successful because: I enjoyed the two chapters I read.
My Friday contract is: To play "Monopoly"	I will work: With Joan, Sue, and Brenda	I (was, was not) successful because: I lost!
My Monday contract is: To make a ceramic pot	I will work: By myself	I (was, was not) successful because: I really like working with clay.

My evaluation of the week:

It was a pretty good week. I should have worked more on my health project. I will next week, though.

Process

The other variable in structuring instruction is the amount of prescription you include in the process by which students work toward their objectives. Some students work best with tight prescriptions for how to proceed, and frequent feedback on their progress. They want to know exactly what they have to do to get where they are going, and they want to make sure they are on the right track as they go along. Programmed instruction provides such a tight structure, prescribing each step and giving the student feedback after each step. Job sheets also provide a tight structure, with step-by-step instructions for how to proceed, but less frequent feedback built in.

Students who are more divergent in their thinking, or whose particular skills and thinking patterns do not follow the prescribed routes, will have difficulty learning in such tight, pre-set structures. They will either do rote work without any real learning consequences, or struggle unsuccessfully with the prescribed structures, or become bored and negligent in their work. These students need more freedom to choose their own ways of getting where they are headed. You can deal with these students in a couple of ways. You can either plan all instruction ahead of time, building in options for students to choose from, or you can, again, negotiate individually with students and have them actively involved in the planning process. The Learning Stations on Instructional Formats (at the Instructional Management Data Bank) describe several formats that build in options for students; learning stations, learning activity packets (Laps), activity cards, and contracts. For more information on these formats, investigate the stations at that Data Bank.

The suggestions thus far have focused on some instructional formats that build in varying amounts of structure. The following scale summarizes the varying degrees of structure built into the instructional formats that have been mentioned:

TIGHT, CONTROLLED STRUCTURE OPEN-ENDED STRUCTURE

Programmed Instruction — Job Sheets — Activity Cards — LAPs — Learning Stations — Contracts

All of the suggestions thus far have been in relation to instructional formats that guide students in independent work.

There are also some techniques and strategies that should be looked at for structuring discrete activities. For example, in structuring the use of audiovisual materials (films, filmstrips, televised programs, or movies), there is a whole range of techniques that can be used which vary the amount of structure the student is given in responding to the media. A type of continuum is listed below, with the first items representing a more open-ended structure, and progressing to a more tight, controlled structure:

1. Have students experience the medium with follow-up of private, quiet reflection time.
2. Allow an open group discussion as a follow-up.
3. Delete the sound from a sound-sight presentation, having students focus their attention on action, facial expressions, and their own interpretations and associations; follow-up with mime, role-play, or the making of masks.
4. Have a follow-up group discussion using structured questions, requiring written or oral responses from the students.
5. Provide questions/observation categories for students before the event, in order to focus their attention on certain aspects.
6. Interrupt the film, tape, or event at specified points to get students to focus on specific themes/ideas.
7. Use programmed materials that "frames" the student's use and interaction with the medium.

The same continuum of open structure to tight structure applies to numerous other contexts. For example, in using reading materials, you can give students unfinished stories for them to complete (encouraging them to consider alternatives for action in various specific situations); structure the reading so that it is interrupted at specific points (in order to focus on specific themes); or provide them with programmed, framed readings that focus attention all along the way.

Different types of small group activities also include varying amounts of structure. For example, buzz groups are very loosely structured, in that you give a group a topic or a choice of topics, and they discuss it without any specific guidelines on how to proceed, their only limitation being time. A brainstorming group is quite different; the key to its effectiveness is the tight structure: limited time frames, rules for how people are to interact, steps to follow in generating and processing information. The problem-solving or value-clarifying small group types fall between the two mentioned in terms of structure. They both include a sequence of steps or a process, but do not structure the transition from one step to another in terms of specific time limitations.

The structure you impose on your teaching strategies will have a great deal of effect on the learning outcomes of students. It is always important to keep in mind the goals and objectives of any particular activity, assessing the importance of a tight or loose structure. But also, it is important to keep in mind the type of structural patterns that your individual students seem to prefer in learning. If you consistently match the student's structural needs with your strategies, you will find amazing, satisfying results for you both.

Rate

It is common knowledge that we all move at a different pace in our work and in our play. Some people go racing through life, hardly stopping to breathe between activities. Others need a slower, more contemplative place in order to fully savor and absorb each activity. Still others operate with jerks and halts, making fast headway, then lying dormant for periods. These pacing patterns within each individual are very important to recognize and respond to in instruction. Your response will be in terms of the rate at which you instruct the student and expect him/her to respond.

The instructional rate is reflected in how fast or how slow you move students through activities, lessons, and assignments. There will always be a creative tension in trying to match your pacing with the varied rates of the students. It certainly does not work to expect all students to respond and work at the same rate on the same materials.

There are two strategies for dealing with varied student learning rates: one is varying the type and amount of work assigned to individual students and having all students finish their work within the same time frame (1 hour, 1 period, 1 day); the other is to make less variations in the types of assignments, and to vary the allowed time limitations for completing the assignment (some students should finish in one hour, some in two, etc.).

Both strategies call for differentiating assignments among students. That means you will need some way of communicating and managing those different assignments. Job sheets and contracts both can serve this purpose (for more information, see the Instructional Formats Station at the Instructional Management Data Bank). A very important aspect of job sheets and contracts is that they both are structured so that the student can work at his/her own pace, within a limited framework. They are flexible enough to accommodate the "get-it-all-done-as-fast-as-you-can-student"; the "wait-till-the-last-minute-student"; the "work-steady-as-you-go-student"; the "work-a-while-visit-awhile-student"; and the myriad of the other types of students that you know so well. In using contracts and job sheets, you set the outer limits, and the students pace themselves during the time in between.

Interaction

As you already know, different students need varying degrees of interaction with others to enhance their learning. Some students work best in isolation from others, others seem to need the interchange of ideas to stimulate their own thought, and still others need the presence of others to keep focused on their task instead of wandering.

As a teacher, you can think in terms of four grouping strategies: independent work; peer-pair work; small group work; large group work. You will need to vary the strategies both according to the students' preferred learning styles and to the instructional purposes of the activity (for example, having students working in peer pairs on an exam would contradict the purpose of the testing).

In organizing to utilize the varied grouping strategies, you need to consider two things: how you can communicate the grouping patterns to the students, and how you can arrange the environment to incorporate the varied grouping patterns. You can communicate the grouping patterns to students in several ways. You can make it a norm that they may choose to work alone or with selected partners on all tasks except exams, or you can describe the desired grouping patterns in the task directions.

In terms of arranging the learning environment to incorporate the variety of grouping patterns, you will need to establish spaces for each of the types. You will need to set aside private corners or carrels for the independent work areas or tables for the peer pairs and small groups; and large spaces to accommodate large numbers of students. Your arrangement will have to reflect you, the space you have to work with, and the materials and equipment you have. For further ideas on space arrangements, go to the Learning Environment Data Bank to see a variety of space arrangement drawings.

Excerpted from: Data Bank Guide Learning Styles.
Mainstreaming Mildly Handicapped Student
into the Regular Classroom. Education
Service Center, Region XIII, Austin,
Texas, 1975.

HANDOUT 4

Task Sheet For Responding Strategically to Style

1. The four teaching strategy variables discussed were:

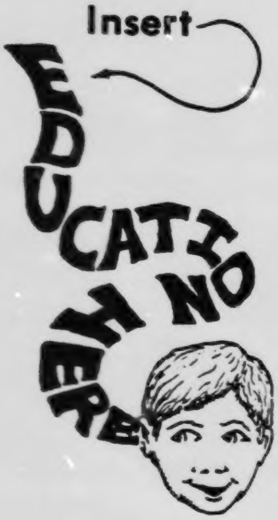
2. Make suggestions for activities for the following students:

Alice prefers auditory input/verbal output and has good self-structuring skills and independent work habits. She is learning the concept of state capitals. Make a suggestion for a lesson considering three of the four variables.

Dan is a visual learner. He prefers verbal output but does better when writing answers. He is very active and distractible. He is learning carrying (regrouping) in addition. Make a suggestion for instructional materials using three out of the four variables.

IMPLEMENTING THE IEP: HANDOUT 5
PROVIDING A CONDUCIVE ENVIRONMENT

The classroom environment consists of many elements. It is the walls, floor and ceiling of the building. It is the furniture. It is the feeling of space—or lack of it. Environment is the materials used to aid learning. It is time, its organization and use in the school day. And most of all, it is the interactions and feelings between the teacher and the students and among the students themselves.



One of the most important jobs of a teacher is to create an environment which fosters both emotional and intellectual growth for each person in the classroom. The traditional classroom was designed to permit only one type of interaction—teacher to student. The room was often fairly barren. It stood in the belief that the only meaningful learning that took place in the classroom was that which poured from the teacher's mouth into the child's ear. Of course there were textbooks and readers to help the teacher. But often the environment was designed to turn off any imagination or creativity in the belief that these interfered with the "real" learning which was supposed to take place.

In a traditional classroom, "the children had little chance of showing initiative. The sums they worked, the compositions they wrote, the poems they learned, the books they read, the topics they studied were all chosen for them. They did what they were told, and when they had finished they waited for more or 'got out their readers'." (Blackie 1971, p.41)

The traditional classroom is fast becoming an anachronism in the light of much educational research.

For example, Froebel's work with young children led to the development of kindergarten settings with family-like environments and inter-age groupings. Susan Isaacs' research pointed up the importance of play activities as the primary way in which nursery school children learn about the world. Maria Montessori devised a system of education based on the concept that children learn best when they explore materials through their senses.

Dewey theorized that children learn best when they are actively involved. His phrase "learning by doing" means that each child is the prime agent of his own education, and that what a child

Room Environment

MATERIALS TAKEN FROM: VOLKMAR, C. & LANGSTAFF, A, & HIGGINS, M.
STRUCTURING THE CLASSROOM FOR SUCCESS.
CHARLES E. MERRILL PUBL. CO., COLUMBUS,
OHIO. 1974, PP. 16-22 (Reprinted with permission of Merrill Publishing Co.)

learns is closely related to his own activities and his own purposes. . . . A synthesis of these and other theoretical considerations provides firm support for a growing trend toward open education in the United States as well as in the primary schools of Britain. (Hertzberg and Stone 1971, p. 16)

More efficient methods of learning are imperative in this age of the knowledge explosion. We can no longer ignore the intensity and amount of learning that takes place outside of school. We can no longer ignore the influence of television or the extent to which children learn from and teach each other. The classroom atmosphere must match the excitement, variety, and complexity of the real world if it is to capture the interests and meet the demands of today's students.

Classroom learning is more effective if it grows out of the interests of the students, and if the environment provides the learners with the maximum opportunity to make choices and decisions, to gather information to examine alternatives and consequences. Traditional classrooms which tend to restrict movement and inhibit interaction *can* be restructured into learning communities where experimentation, the exchange of ideas and the development of feeling and meaning, are possible.

> I hear . . . and I forget.
> I see . . . and I remember.
> I do . . . and I understand.—Ancient Chinese Proverb

Creating an Atmosphere

An inviting atmosphere can be brought into the classroom in many ways. Modern posters and psychedelia can dress up drab walls and lifeless bulletin boards. Today's music, music of all types from Beethoven to the Beatles, from Chopin to Chicago, and the sights and sounds of the world can be the children's through records, tapes, films, and other media.

Many common objects can be "arranged in new and attractive ways so that children are helped to see the beauty in everyday things" (Hertzberg and Stone 1971, p. 19). One school, as part of an ecology theme, held a "Rubbish Art Festival."

Among the many offerings on display were collages of wrappers and labels, meat-carton mobiles, tin-can sculptures, and flower arrangements made from egg cartons. The teacher merely supplied the theme. The students provided the imagination—and most of the materials!

One of the most common "Yes, buts" heard from teachers in regard to the open classroom is, "Yes, but our school district is on a very limited budget. How can we afford to do this?" The answer is that it is not necessary to buy everything. There is much available already—it is just not being used in this way. Most of the standard classroom furniture can be adapted to the needs of a more flexible environment. Colorful posters, mobiles, carpet squares, pillows, even couches and easy chairs can be acquired at little cost if one uses ingenuity. One group of teachers who embarked on a project to open their classrooms, to create learning centers and a more informal atmosphere for their students, sent home a list of items they needed and asked the parents to donate what they could. The list included games, fabric scraps, old magazines, old typewriters, couches, chairs, area rugs. The response was much better than the teachers had anticipated. Furniture, games, and other materials flowed in from parents, neighbors, and friends. Almost every room acquired a typewriter. There were many old couches and easy chairs. The teachers appropriated a closet that had been used by the school custodian to make a storage area for the many toys and games, in addition to a communal storage area of materials and activity cards for the learning centers they had set up in their classrooms (Palm School, Hacienda-La Puente School District, California).

At another school, the teachers seemed to be experts at making all kinds of things from cardboard and other items picked up from commercial discards. Room dividers, study carrels, puppet theaters, even geodesic domes can be made from boxes obtained from stores and factories who are discarding them. "Trash can do it!"

The teacher who claims to be too poor to create an inviting and stimulating room environment is only admitting to a poverty of imagination. The open classroom, more than anything else, is a state of mind. The teacher who knows that the greatest resource is the imagination and creativity of students has found the key.

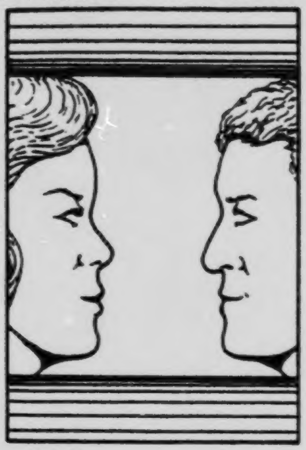
The Spectrum of Spectrums

Children Are the Key

The objects and questions which children bring to the classroom can give the teacher valuable insights as to how to expand the learning resources of the room. Children develop a feeling of participation and belonging when they see their work and their possessions displayed around the classroom. When the environment is regarded as a partner in learning, the students share in creating their own learning environment, and therefore are entitled to make choices about how best to use it. The system operates effectively only if the teacher trusts the students to make meaningful decisions about contents, methods, and materials. This is the root of active learning.

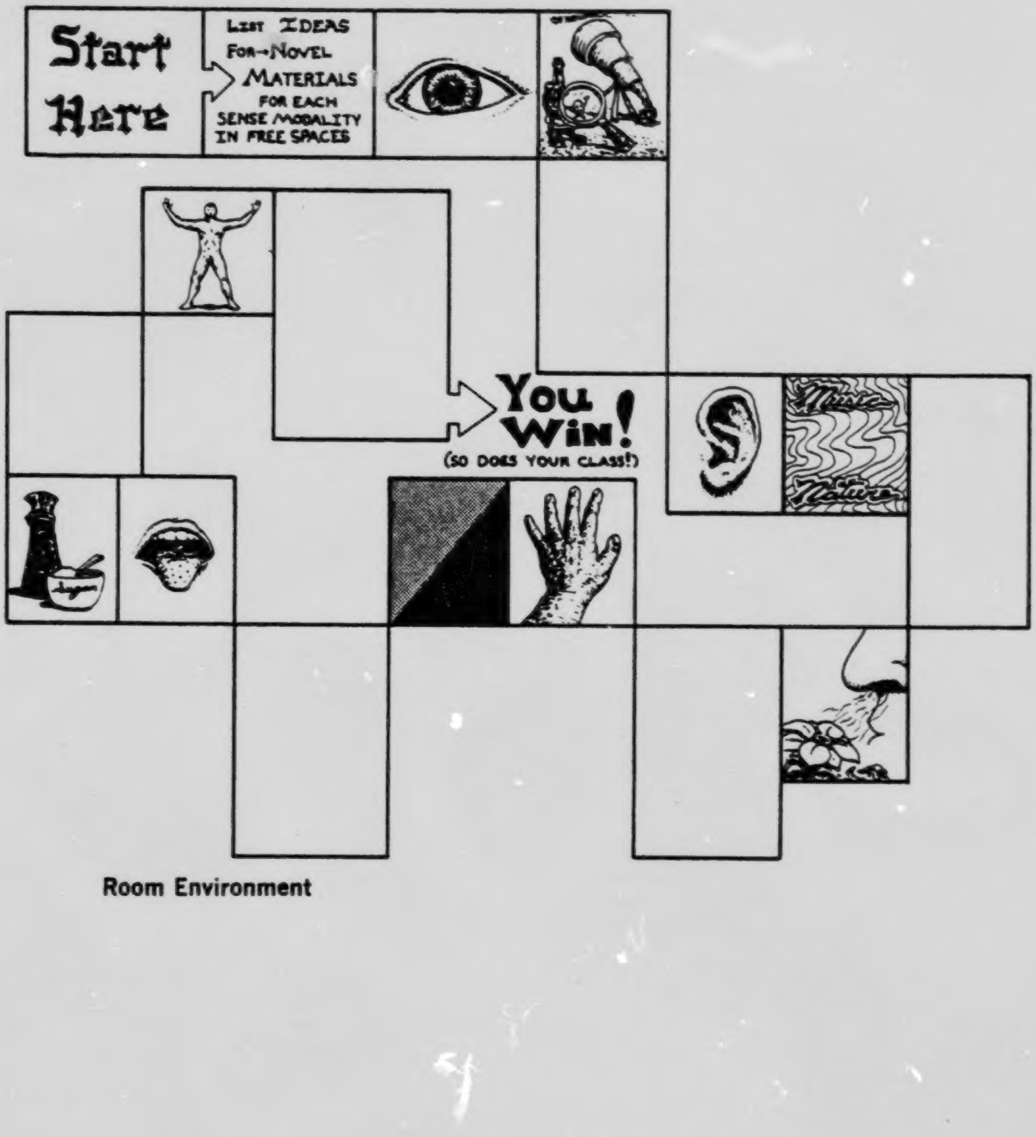
Methods and Materials

Children learn in different ways; this means that a variety of methods and techniques are necessary. Group instruction should be used when it is the most efficient method for a particular purpose, never simply because it is expedient. Traditional classroom materials—the blackboard, textbooks, and workbooks—can be supplemented with equipment such as the typewriter, overhead projector, tape recorder, and camera. Thus, the number of ways the student can record, express, and communicate his perceptions and interpretations of the environment is increased. Materials which appeal to all the sensory modalities—visual, auditory, tactual, kinesthetic—should be included so as to increase the child's opportunity to acquire skills, attitudes, and knowledge he will need in the future. Children learn through touching, tasting, sharing, listening, and seeing. Flexibility and novelty should be inherent in many activities. Children are curious about the phenomena of nature, the human body, machines, and communication devices. The tools and elements for discovering and exploring these and the many other dimensions of the environment should be provided. Students learn from interacting with real objects and events such as planting seeds and watching chicks



hatch. Such activities give them practice in predicting and managing their environment, and the chance to arrive at their own conclusions. Through first-hand experience in sewing, woodworking, and following recipes they learn, for example, the practical application of mathematics.

In order to make learning spontaneous and personally relevant, the teacher should provide the resources for children so that they can find the answers to their own questions. Much education is lost when we arbitrarily provide answers to questions that the students haven't the need to ask.


Start Here
List Ideas For→Novel Materials for each sense modality in free spaces
You Win!
(so does your class!)
Music
Nature
Sugar

Room Environment

Organization

There is no single model for creating a successful learning environment; endless variations evolve out of the combined creativity of students and teachers. The teacher who is receptive to the ideas and experiences of children can help students plan a classroom which is productive for all. The total room arrangement should reflect the teaching style of the teacher as well as the interests and learning needs of the students.

Furniture arrangements are fluid: tables and chairs can be placed in small groups for seminars, or clustered together for cooperative planning projects or class discussions. Individual desks or tables are available for those who wish to be alone with their work. Open space elicits new responses from the teacher and from the students. The teacher's desk is no longer the focal point of the room; in fact, it may not be needed at all by the teacher who moves about the classroom participating in and guiding the diverse learning activities of the students. Learning environments designed in this manner are sometimes called "open" or "decentralized" classrooms.

Centers

The open or decentralized classroom can be structured around several "centers." Centers are unique areas in the room which provide self-directed learning experiences for students in the various subject areas. This plan is possible in the self-contained classroom and also in team teaching situations. As a first step, the core of the room might be an area where children engage in individual academic tasks calling for the use of books and paper and pencil materials. In some classrooms this area is called an *achievement center*. In large classrooms, this area can also function as a study hall. It may become unnecessary to designate the achievement center as a separate area if most of the day's activities are taken up in the other learning centers.

Specific ideas for the self-contained activity centers are shown in the filmstrips and more will be presented in the next chapter. Each center contains a choice of meaningful activities and specific materials planned and selected to match the interests and ability levels of the learners. Special purpose areas can be designated around the room where messy or noisy activities can be isolated, or where students can retreat for a quiet period of reading, thinking, or listening. Various types of room dividers can be devised to help partition areas of the room. (An idea page on room dividers is included on page 30.)

Sufficient instructions are given so that students can function effectively in the centers with a minimum of teacher supervision. The teacher helps the students schedule the time they spend in center activities so that no one area becomes so crowded or noisy that productive learning cannot take place. Freedom without clearly established guidelines may result in chaos; though children need guidelines telling them what behavior is expected of them, they also need freedom to learn to manage their own behavior. Rules, established together by teacher and students, are enforced by the teacher. The teacher must be able to articulate clearly the aims and objectives of classroom learning and to establish performance criteria for individual students. The open classroom plan places the teacher in a new role. He may be seen as a resource person, or a facilitator of the learning process, rather than as a keeper of order and a dispenser of information. While more informal interaction is encouraged, planning and limit setting are not abandoned by the teacher; in fact, these activities become more essential than ever.

> If a classroom is well organized, a child can find what he needs to work with. If the room is filled with beauty, a child can learn to care for and value beautiful things. If supplies are readily available, the child learns to choose and to share. If a variety of materials is available, the child learns something about making intelligent choices. If adults show respect for and trust in the child, he will learn to experiment without fear of failure. Both the physical and the emotional elements of the environment influence learning. There is a vast difference between a child living in a warm, welcoming environment—and simply "going to school." (Hertzberg and Stone 1971, p. 6)

Here's How to Begin

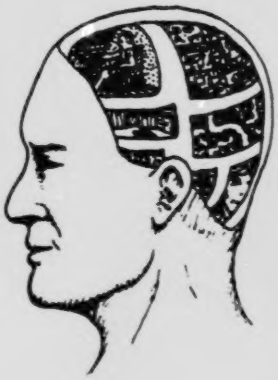
To create a more responsive room environment, you might take these steps:

IMPLEMENTING THE IEP: HANDOUT 6
PROVIDING A CONDUCIVE ENVIRONMENT

HERE'S HOW TO BEGIN:

1. Look over the room. Evaluate its strengths and weaknesses in size, floor space, the furniture, windows, walls, bulletin board space, and so forth. This is an excellent observation exercise in which the children can participate. Listen carefully to what the children feel about *their* room. You might even sneak in a geometry lesson by having some of the children draw a to-scale floor plan of the room.

2. Go to work with your imagination. Decide what kind of centers you would like to have, how many, where to put them. Take into account immovable objects in the room such as the sink, closets, and electrical outlets. A science center and an art center would be best near the sink, where the water is handy. Some classrooms have put a math center near the sink when the children were involved in learning measurement. The children learned from first-hand experience at the sink how many pints in a quart, quarts in a gallon, and how many gallons it takes to fill the sink! Audio-visual centers need access to the electrical outlets. Quiet areas of the room, such as the library center, should be well out of the path of in and out traffic in the classroom. You may have to take into account the kinds of furniture you have available. Do you have only single desks or are there various types of desks and tables? If your classroom furniture is of limited variety . . . never fear. One can always push single desks together to make small group work areas. If you only have tables, you can devise cardboard dividers for the table tops to partition off some individual study areas. Whatever you have, let it function in the way that it serves you and the class best for the type of activity going on.



Again, take advantage of the children's imaginations. The more they help in planning their environment, the more personally *theirs* the room becomes.

3. Experiment with space. Another "Yes, but" that inevitably comes up is, "Yes, but how do I get six learning centers into an already overcrowded classroom with 36 kids and 36 desks?"

Counter-question: Do you really need to have 36 desks just because you have 36 children? Or 12 or 20 desks because you

Room Environment

MATERIALS TAKEN FROM: VOLKMAR, C., LANGSTAFF, A., & HIGGINS, M.
STRUCTURING THE CLASSROOM FOR SUCCESS.
CHARLES E. MERRILL PUBL. CO., COLUMBUS,
OHIO. 1974, PP. 23-32.

have 12 or 20 children? Don't waste your space trying to keep the sacred rows of desks intact. The British Primary schools are often described as having open classrooms where 40+ students move freely and work comfortably. Some stand to paint, others sit on the floor while measuring lengths of various objects or playing games. Some children sit on pillows or easy chairs reading, while others work at the tables and desks around the rooms. Some classrooms have expanded their boundaries to include an outdoor area near the room. The flexible classroom may even feel roomier because it is being used in so many different ways. Some classrooms still keep a core area or achievement center where paper and pencil tasks take place. But it is not necessary for all of the students to be there at the same time. When the teacher wants the entire group to be called together for something, extra chairs can be moved in from other areas of the room or people may sit on the floor.

So move, or even remove, some of the furniture, if necessary. Many of the tables and desks can be incorporated into the centers or used as boundaries for the centers.

The question may arise about where to keep each child's personal possessions if not in his own desk. One idea is for each child to have a portable drawer or box with his pencils, papers, workbooks, and folders. The drawers or boxes can be stacked in a common storage area. The student can go to his drawer and obtain the materials he needs or the entire drawer can be carried by the student to another working area.

4. Once the room is arranged for your new learning environment, bring in the materials and activities for the learning centers. Often, this is more a process of bringing out than bringing in. In many classrooms, materials are stored away in closets out of the reach of children. To the teacher they are often out of sight, out of mind. As much as possible, the materials in the room should be accessible to the students. The storage areas should be within their reach and well-marked so that the students know not only where to get the material

they require, but also where to put them away when they are done with them.

There are many unique storage ideas—clear plastic shoe boxes, cardboard boxes, large ice cream cartons, and cans covered with bright contact paper, brick and board shelves, and orange crates—all have served as easy-access storage units in classrooms. They sometimes add brightness, variety and texture to otherwise work-a-day classroom furnishings. Some sources of materials for the learning centers are discussed in the next chapter.

5. Don't think you've finished the job! The classroom environment cannot stay static anymore than the children within it can cease to grow. Be constantly vigilant for new and interesting items to bring into the classroom. Add new things to the centers and remove things that are no longer interesting to the children. Take your cues from the students. Be alert to their interests and cater to them, expand on them, enjoy them, and let the children move on when they are ready. If some material in one of the centers is not being used, try to discover whether it is from lack of interest or because the children do not know how to use it. If it is the latter, take some time to show the children how it can be used.

Never underestimate the power of novelty. Though some items have long-term appeal, others hold children's interest for only a short time. The learning value may not be lessened by its short attention-holding powers. But don't let material sit around unused. There are many more interesting things that could be using the space. Also, a room that is too cluttered dampens the effect of even the best materials within it.

Most of all, let the environment be as spontaneous as the learners within it. The space should be structured to guide the learners, not to control them. The classroom is indicative of the school's response to the children. Let it say, "Welcome, I have a treasure of things to share with you. Together we will grow."

Room Environment

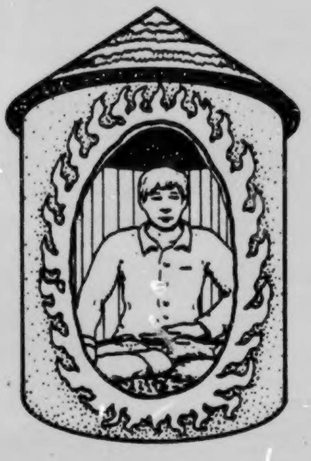
IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

You can use this space to jot down ideas for designing a learning environment. Share your plans with others in your group.

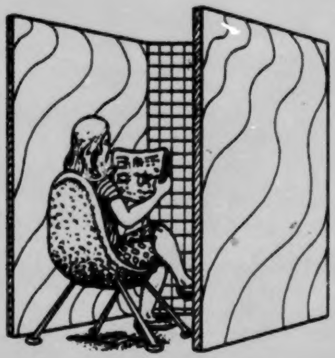
h

Room Environment

Individual Study Carrels



A 50 gallon fiberboard drum:* cut a groovy door in it, sit on a piece of scrap carpet or pillow, paint the outside the way you want it. A place to sit and think, read a book, or be alone.



Another type of study carrel is this portable, lightweight and durable room divider (90 in. long x 46 in. high) by Learning Opportunities, P. O. Box 547, Visalia, California 93277. It can be folded flat for easy storing. Price is $5 each or $4 each for twenty or more.

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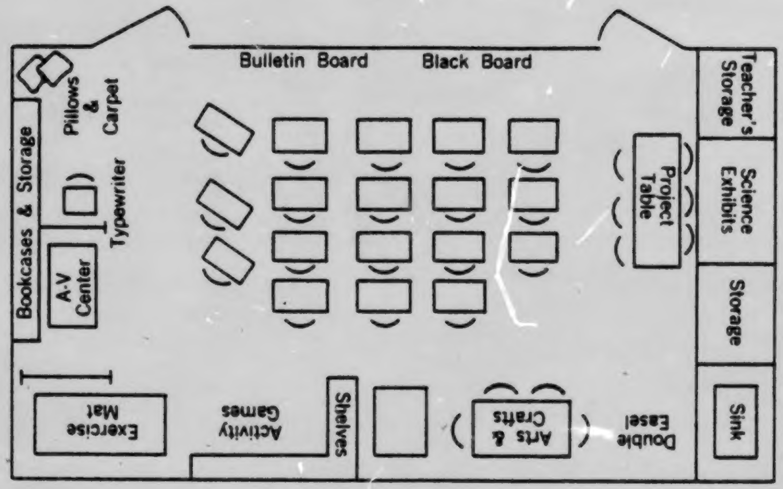
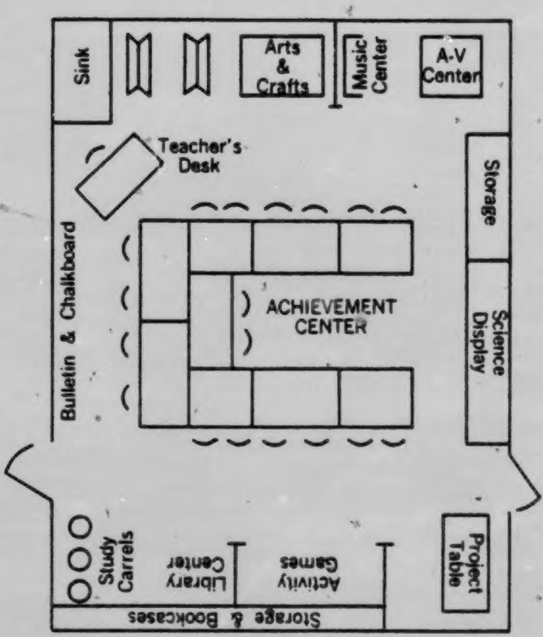
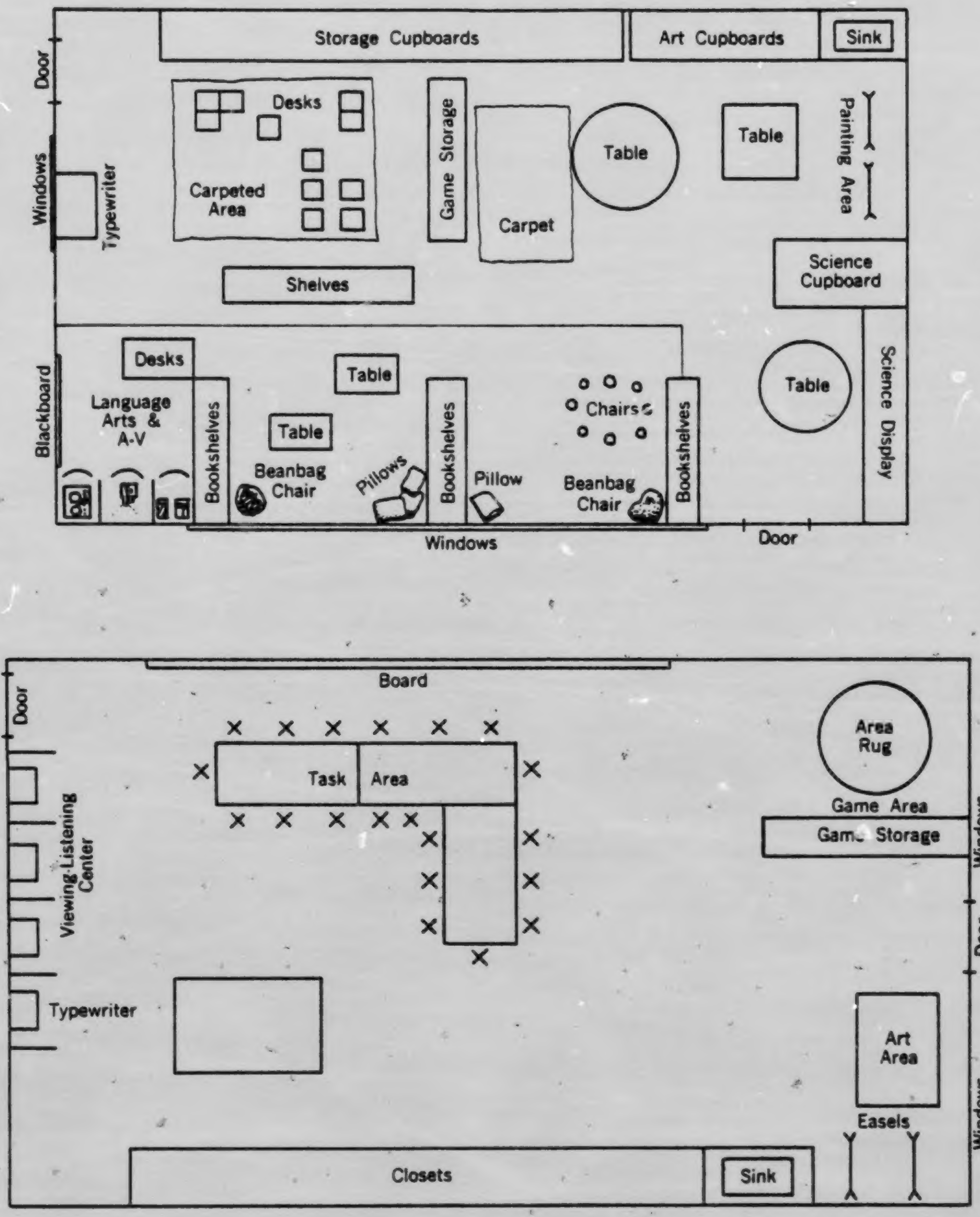
* Idea from Big Rock Candy Mountain—a learning to learn catalog, Portola Institute, 1970.

Sample Room Plans

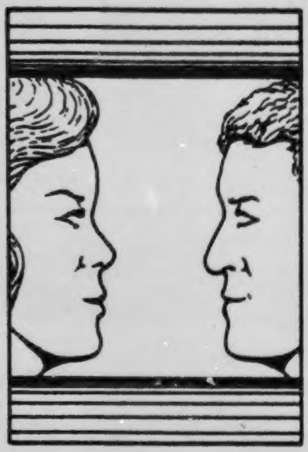

Bulletin Board
Black Board
Pillows & Carpet
Bookcases & Storage
Typewriter
A-V Center
Teacher's Storage
Science Exhibits
Project Table
Storage
Sink
Double Easel
Arts & Crafts
Shelves
Activity Games
Exercise Mat


Sink
Arts & Crafts
Music Center
A-V Center
Teacher's Desk
Storage
Bulletin & Chalkboard
ACHIEVEMENT CENTER
Science Display
Study Carrels
Library Center
Activity Games
Project Table
Storage & Bookcases

Room Environment


Storage Cupboards
Art Cupboards
Sink
Door
Desks
Game Storage
Table
Table
Painting Area
Windows
Typewriter
Carpeted Area
Carpet
Shelves
Science Cupboard
Desks
Table
Table
Blackboard
Language Arts & A-V
Bookshelves
Table
Bookshelves
Chairs
Bookshelves
Science Display
Beanbag Chair
Pillows
Pillow
Beanbag Chair
Windows
Door
Board
Door
Task Area
Area Rug
Game Area
Game Storage
Windows
Viewing-Listening Center
Door
Typewriter
Art Area
Easels
Windows
Closets
Sink

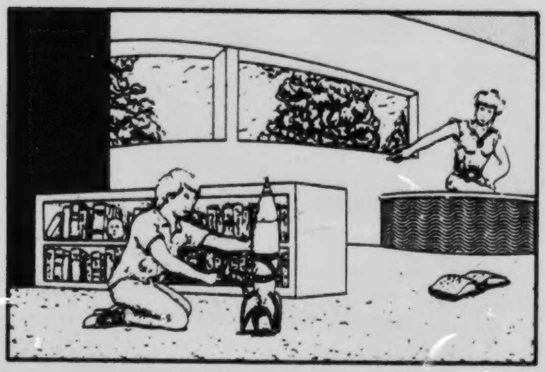
Room Environment



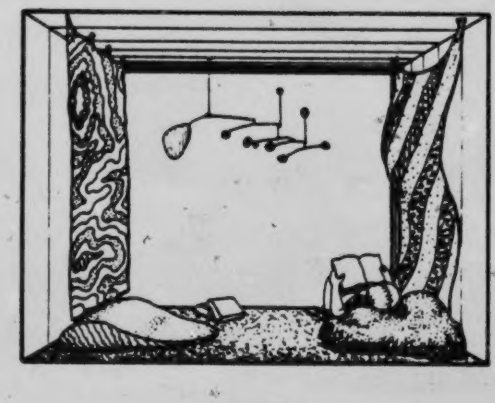
Let your imagination go! Sketch your ideal room environment below.

Room Environment

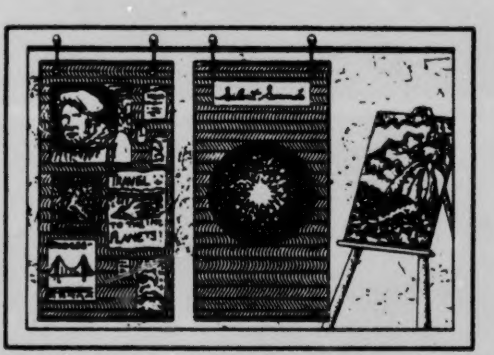
Room Dividers



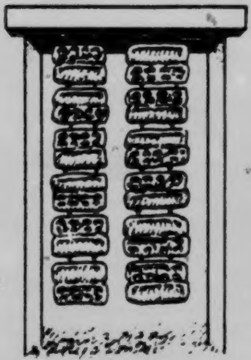
Low book shelves can give a feeling of separation between areas while not cutting off ability to keep visual contact between areas.



Hanging colorful material such as tie-dyed cotton from ceiling provides a visually appealing, soft, enclosed space for quiet activities.



Cardboard, tagboard, or pegboard dividers may screen out sights and some sounds while providing space for bulletin board or artwork displays.



The ubiquitous egg carton is just one of many things which can be collected and strung into clever and different room dividers. Some others are corks, beads, buttons, and string itself.

Room Environment

HANDOUT 7

7

The Open Classroom —Some Ideas on How to Start

The open classroom is a place where learning is fun, challenging, and activity-based. In the filmstrips you saw many ideas on the following areas: room environment, activity centers, behavior management, and individualizing instruction.

Don't be overwhelmed! All of these areas are interrelated and necessary; however, successful changes occur gradually, and you should not expect to be able to make changes in all these areas at once. Remember that change is often difficult; the starting point of change is discontent. If you were entirely satisfied with your classroom, you probably would not have read this far, so you have already passed the first stage.

MATERIALS TAKEN FROM: VOLKMAR, C., LANGSTAFF, A., & HIGGINS, M.
STRUCTURING THE CLASSROOM FOR SUCCESS.
CHARLES E. MERRILL PUB. CO., COLUMBUS,
OHIO: 1974, PP. 167-171.
(Reprinted with permission of Merrill Publishing Co.)

1. Choose one area in which you want to begin changing.

2. After you decide where to begin, make a plan and discuss it with a friend (preferably another teacher who is also interested in trying new things).

3. If you decide to work first in the area of individualizing instruction or behavior management, a helpful idea is to choose ten minutes a day when you and your students try something new. You can then (as a starting point) extend this to one day, a week, etc.

4. If you decide to work in the areas of room arrangement and activity centers, introduce one change in furniture arrangement or one activity center with a few materials at first and gradually build on this.

5. Don't throw out everything you are presently doing!! Start by merely *adding* some new ideas, techniques, and materials to your existing classroom environment and program.

A few final words—give the new idea enough time to take hold with your students. Don't give up too soon. Writing down your plans, your successes and failures will help you to gain insight into alternative approaches.

Good luck!

Teachers' Feelings About Open Education: Two Statements by Teachers Who Are in the Process

I

The term, "open" education, is increasingly heard among theorists and educators and carries with it a myriad of definitions and interpretations. It is often suggested that "open" education is the answer to the so-called "crisis in the schools" that has been vividly described by such critics as John Holt,

IMPLEMENTING THE IEP:
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Herbert Kohl, George Dennison, and Jonathan Kozol. Although open education means different things to different people, there are perhaps characteristics on which all could agree.

Open education is a new approach to learning and to teaching that does away with the traditional elementary classroom setup, the traditional authoritarian role of the teacher, and the traditional role of the student. The traditional approach and methods are replaced by a freer, individualized, child-centered learning experience. It seems to me that there are five important differences between the traditional educational approach and the open educational approach. It is upon these five differences that I base my own philosophy of open education.

Primarily, the open classroom looks different from the traditional classroom. Instead of thirty evenly spaced desks facing the teacher and the blackboard, there is a casual and often changeable arrangement of furniture. The focal point of the room might be an achievement center. In the achievement center individualized academic work is accomplished on a personal basis, or with small groups working together, or with teacher assistance. The academic work is immediately evaluated and if the need arises is supplemented with less demanding or more challenging tasks. A student's success is immediately and systematically rewarded on the basis of what is pleasurable to him, and the choice is his. In the open classroom there are various centers or areas where the student may go to pursue his own talents and interests. These areas may be designated by the following names: arts and crafts, reading, math, science, audio-visual, and games. In addition to being rewarded for academic progress, the student is being reinforced in many areas while working in the centers. He is learning cooperation, strategy, hand-eye coordination, language and math skills, peer interaction, and innumerable other factors in individual development.

Secondly, in an open classroom the students are free to walk around the room, or to lounge on pillows or rugs, and to talk. There is an atmosphere of casualness and excitement. The students are busy on individual or group projects and although the teacher is available for consultation or assistance, the students are primarily directing their own activities.

The teacher and his attitude is a third difference in an open classroom. Instead of being forced into an authoritarian role that expects "right answers" and imposes "good conduct," the teacher is also more free.

He is free to be himself, with all of his human frailties and strengths. In the open situation, the teacher is not the imparter of knowledge, nor does he impose his will upon the class. On the other hand, he is not a "pal" nor does he attempt to be a contemporary of his students. He is perhaps more of a guide, and hopefully will be respected for himself as a person as he respects the students and their individual abilities and personalities.

A fourth characteristic of the open classroom is individualized instruction and attention. Rarely is there class instruction or class accomplishment in the traditional sense. Instruction and assistance are sought rather than given. A premise of the open approach is that children want to learn and will learn what they want, when they are ready. Learning comes from a self-directed desire to know, and if a child is given a reason to know, he will learn. Learning, by this method, is often accomplished through a first-hand experience, and the result is exciting, stimulating, and rewarding. When pleasant results are experienced by the student, learning continues and the base of learning broadens, and consequently the individual feels a sense of self-worth. In time, if the satisfying stimulus-response-reward pattern continues, the student will reach out and communicate his humanistic feelings and attitudes toward others. The end result could be an atmosphere where individual differences are encouraged and appreciated, where a truly democratic feeling prevails, and where the warmth and love of fellowship and brotherhood are manifest.

A fifth important difference between open education and the traditional philosophy is the view taken regarding the final objective of the educational process. From the traditional standpoint, the emphasis would seem to be solely on the intellectual preparation of the student. This is accomplished by a rigid set of prescribed courses, that are taken in a set sequence, with pre-determined answers deemed acceptable to indicate competency. Many times, under this system, creativity and original thinking are discouraged and penalized. It is true that under this system great thinkers and creators have been produced, that our country has become the world leader in technology and production, and that as a people we have reached a living standard that is unparalleled in history. It is also true that we have produced a great number of drop-outs, not only from our schools, but from life itself. We face problems that seemingly have no answers in such diverse areas as ecology, international relations, and the conquest of space; and as a people we have perhaps reached a new depth of discouragement that is reflected by our suspicions, hostility, fear, and guilt.

In open education the emphasis is shifted from an intellectual preparation to a preparation for the student's role in life. Equally important is the happiness of the child, the developing of a sense of self-worth, a respect for others, and the fostering of a love for learning that hopefully will continue for life. Creativity and original thinking are encouraged and rewarded in open education. There is no approved course of study, nor are there certain acceptable standards, nor "right answers" and "proper conduct." "Open" truly indicates a willingness to try new approaches, to experiment along different lines, to be uninhibited, and to march to a different drum without guilt, fear, or disapproval.

Open education may not be the panacea of the world's problems, or the nation's problems, or even the problems of education. But I am convinced that it is better than what is now being done, and it is worth a try.

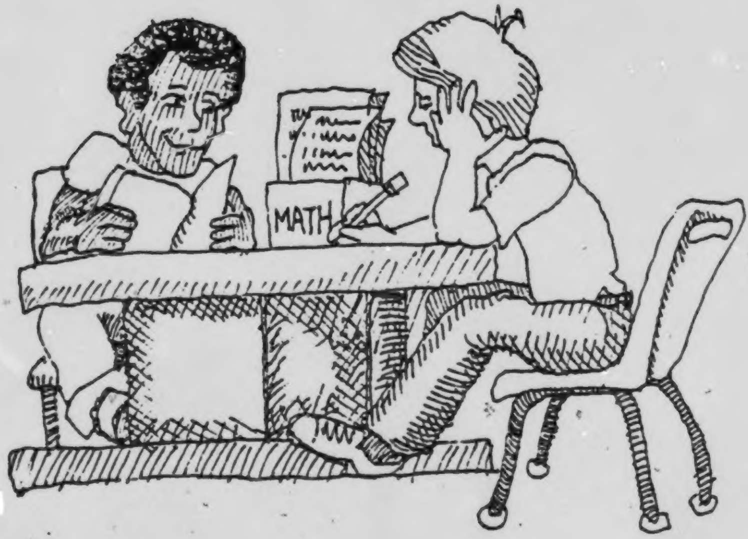
It's been a struggle, but you both have convinced me; I think I've got it!!

Jill Berry
Fullerton, California
July 1972

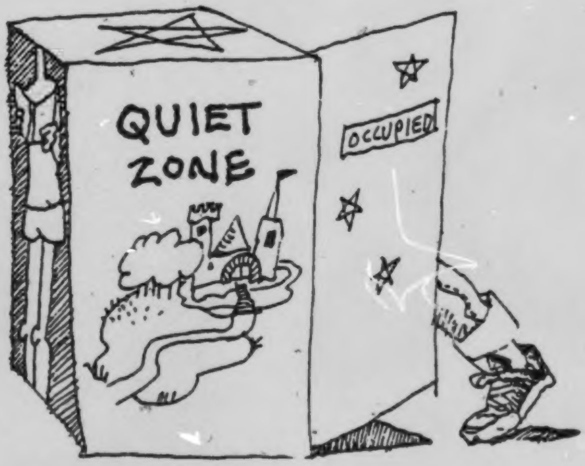
LOFT 18 - D1, 2, 3 - MANAGING LEARNING RESOURCES

Center Furniture for the Environment

Center Furniture

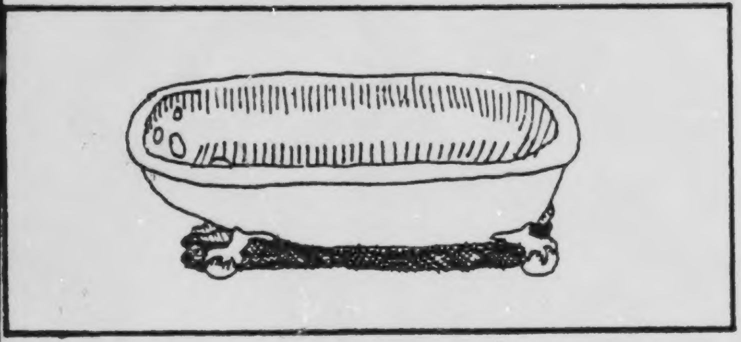


Telephone cable spools make nice tables;


QUIET
ZONE
OCCUPIED

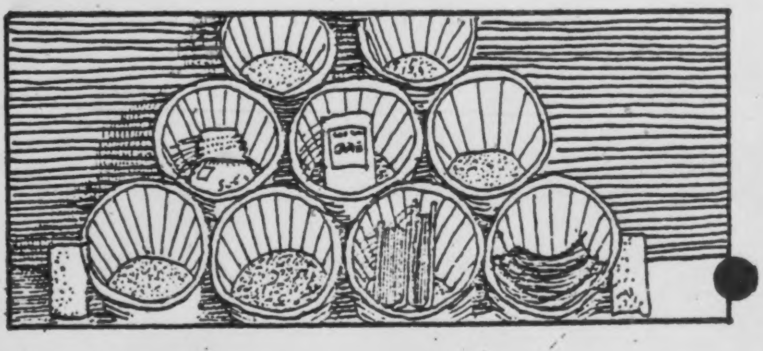
Packing boxes may become independent study areas;

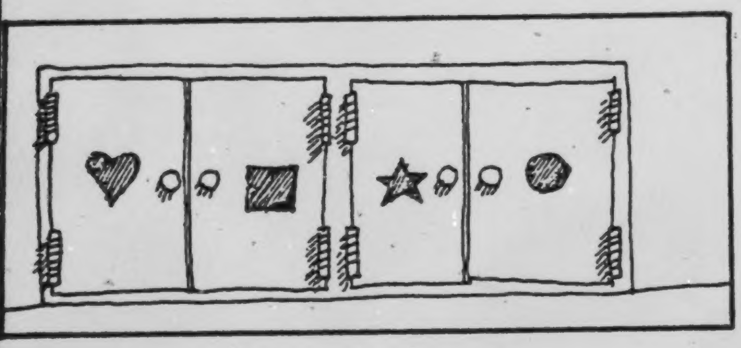
Loft 18-D2



Bathtubs are favorite spots for reading;

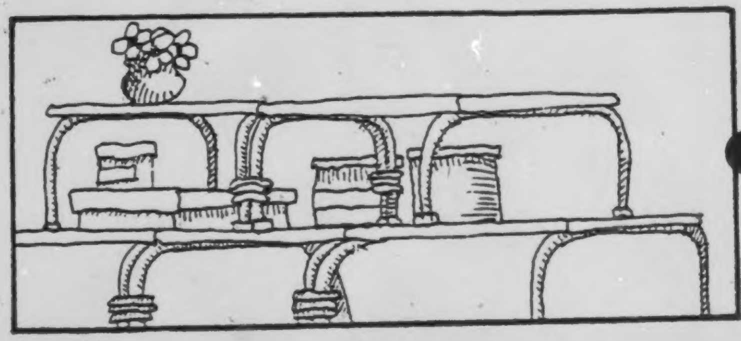
Ice cream cartons may be used for organizing materials and room dividers;



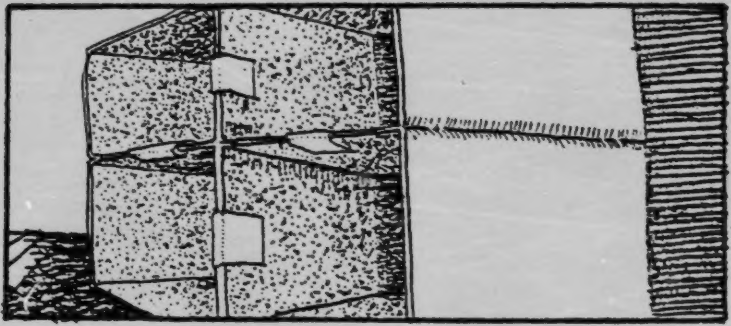


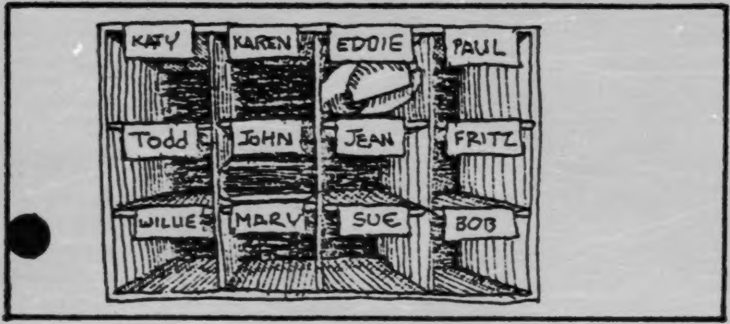
Each cabinet (locker) may be a separate center;

Desks may be stacked for additional space and for room dividers;



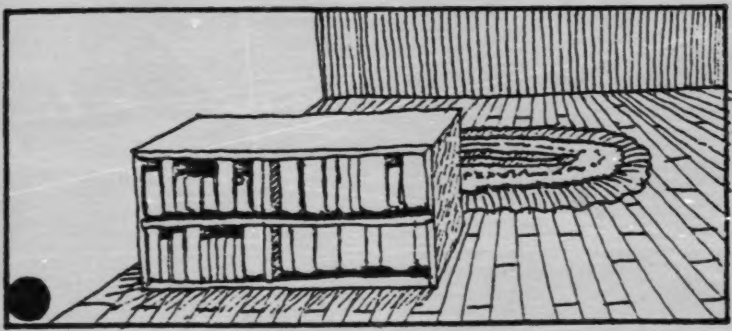
Boxes provide...




KATY
KAREN
EDDIE
PAUL
Todd
JOHN
JEAN
FRITZ
WILLIE
MARY
SUE
BOB

space for...

...student materials and learning resources.



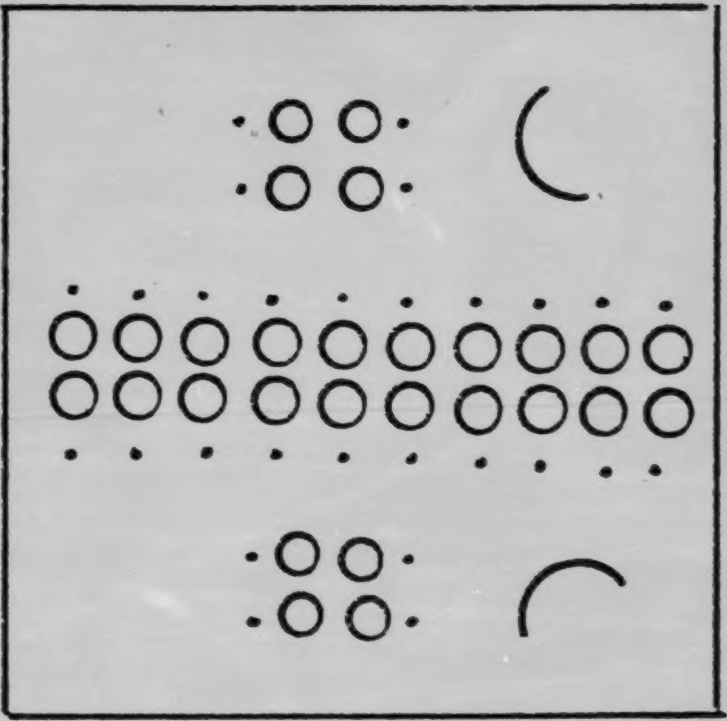
Bookcases may separate two centers if placed perpendicular to the wall.

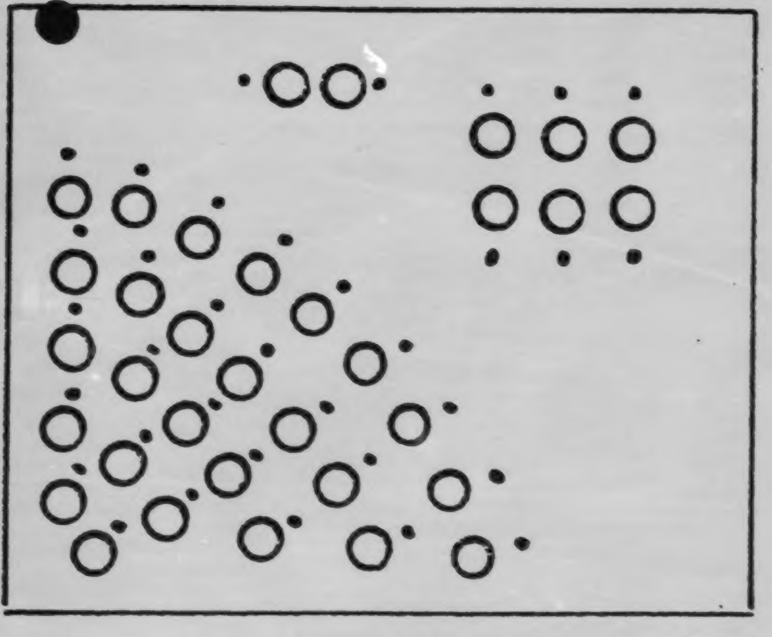
LOFT 18 - E1, 2, 3, 4, 5, 6 - MANAGING LEARNING RESOURCES

Room Arrangements

LOFT 18 - E1

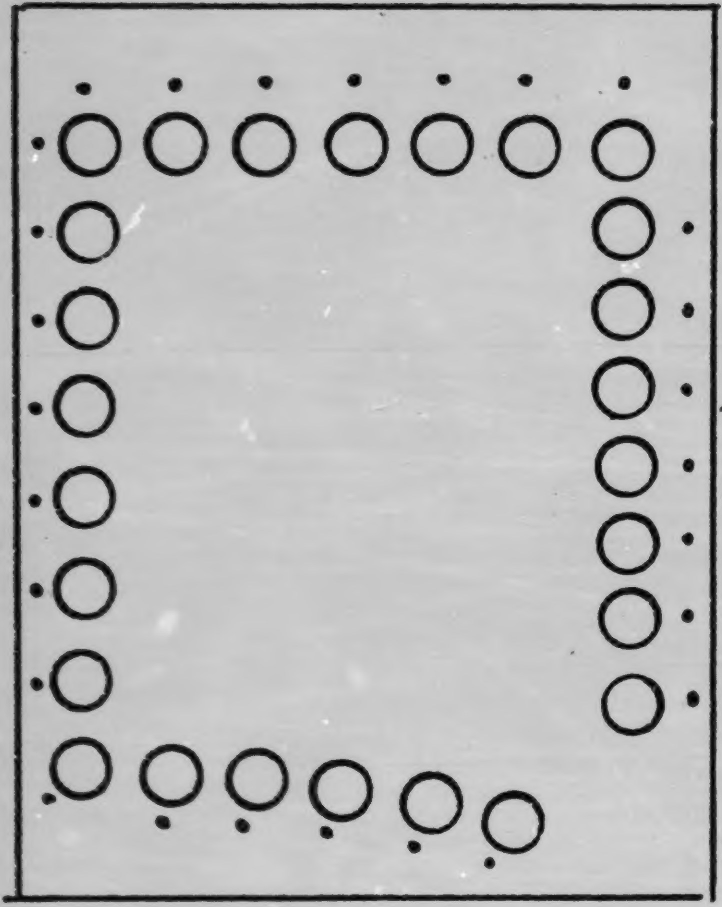
In this arrangement, vision-stops provide small groups with a certain amount of privacy and increase the chances of reinforcing learning teams or inter-group cooperation. The screens or other vision-stops may be removed for large space project requiring open areas.





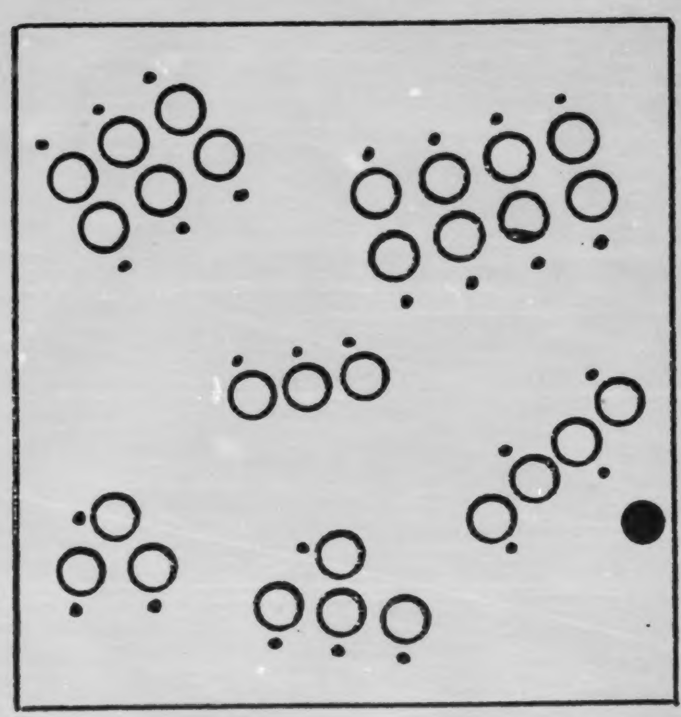
The amphitheater arrangement permits both large and small group activity. Notice in the small groups that children face each other in order to maximize face-to-face interaction. Chairs should be reversed for independent study. Not much freedom of movement is possible with this arrangement.

IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

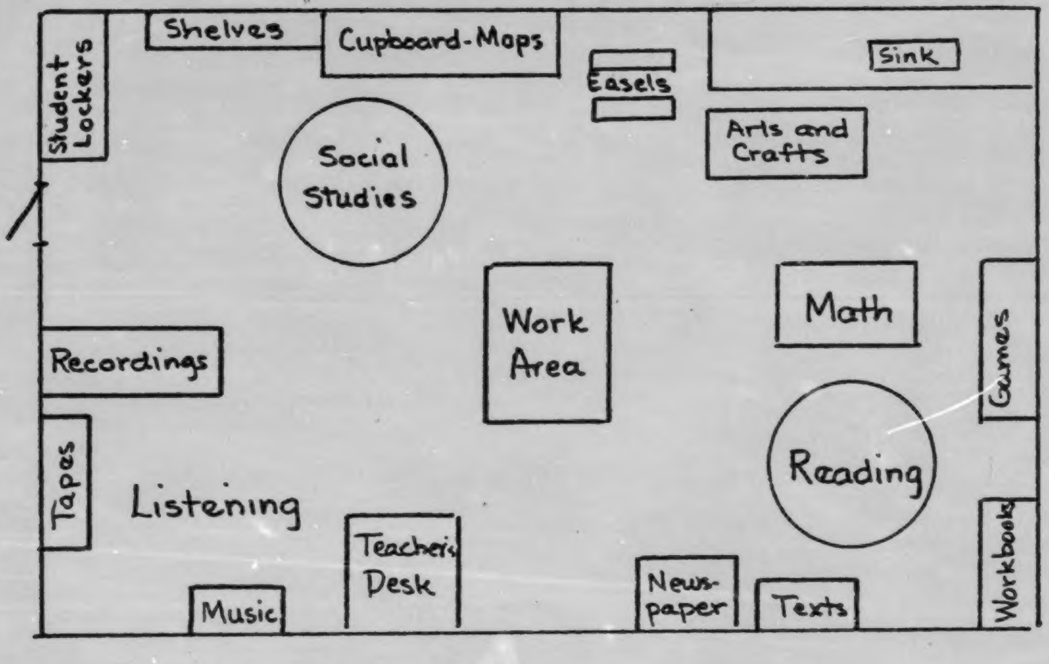


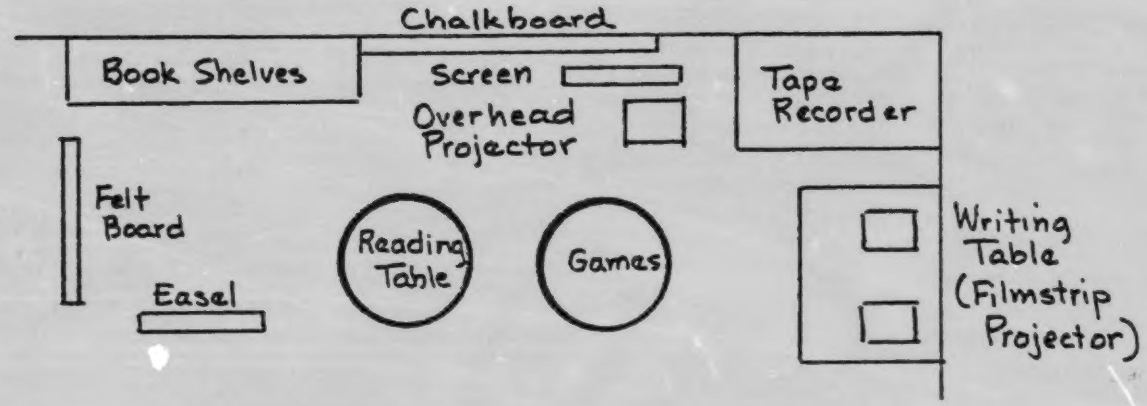
Circle-the-Wagons Arrangement: Since there are no obstructions in the path of vision and movement, communication between students and teacher is easily established. The teacher's movement toward a student is visible by all. Standing close to a student, touching, etc., may be done while talking to the entire group.

The frequently used and flexible arrangement permits small group activities and freedom of movement. With only slight adjustments, the teacher may stand in the middle of the room for whole class discussions.



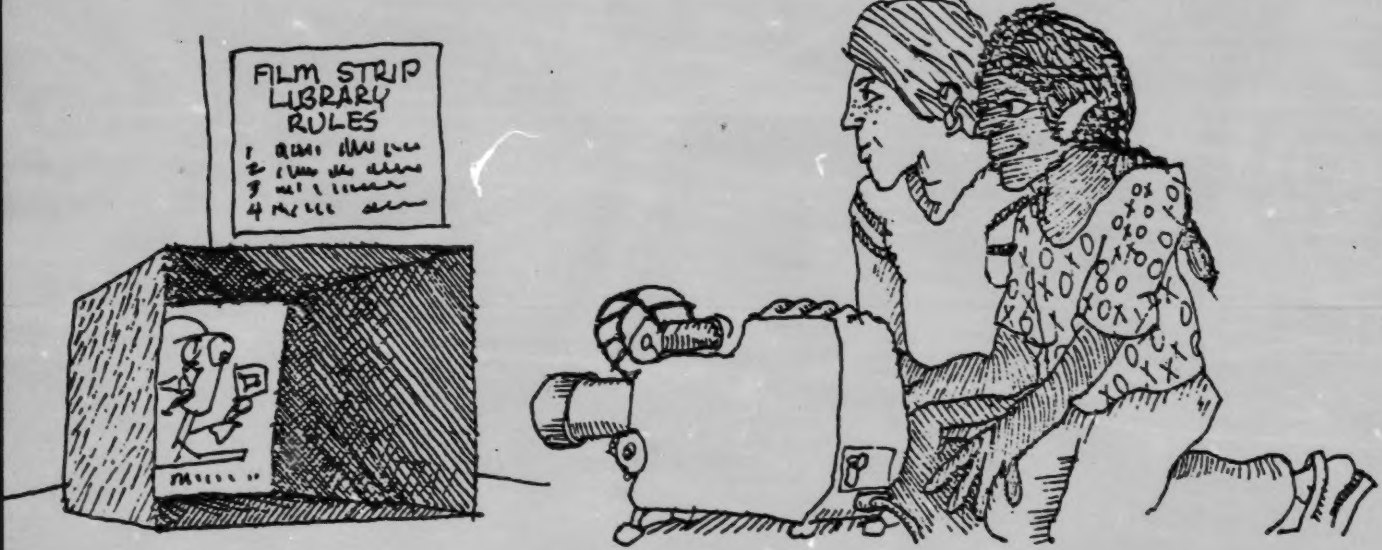
Room Arrangement


Shelves
Cupboard-Maps
Easels
Sink
Student Lockers
Arts and Crafts
Social Studies
Work Area
Math
Games
Recordings
Reading
Tapes
Listening
Teacher's Desk
News-paper
Texts
Workbooks
Music

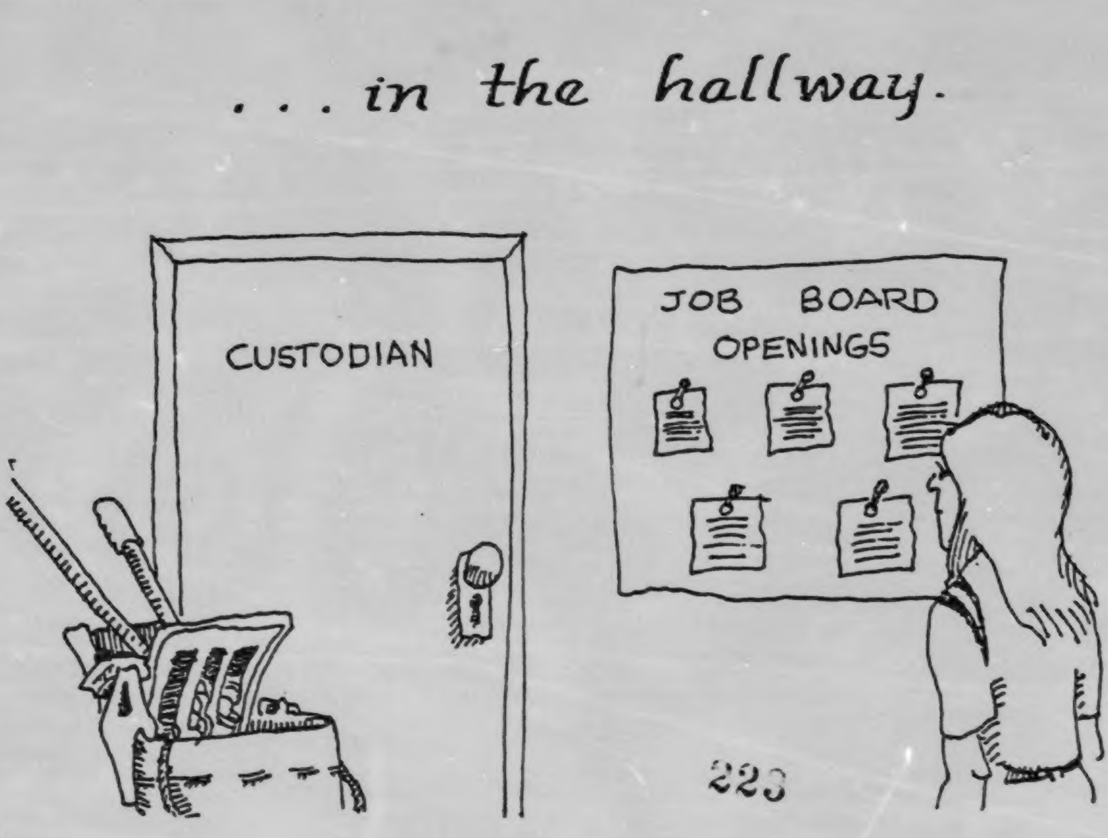

Chalkboard
Book Shelves
Screen
Overhead Projector
Tape Recorder
Felt Board
Reading Table
Games
Writing Table (Filmstrip Projector)
Easel

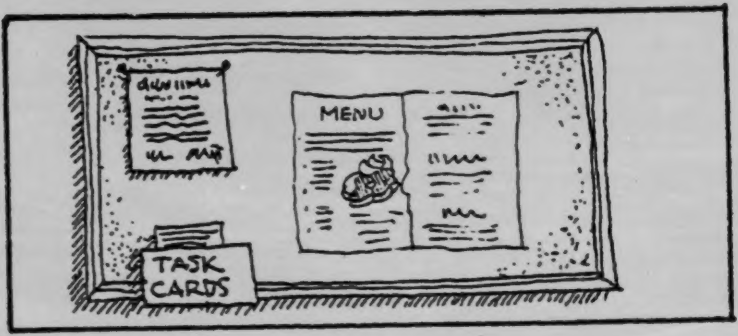
Reading Center

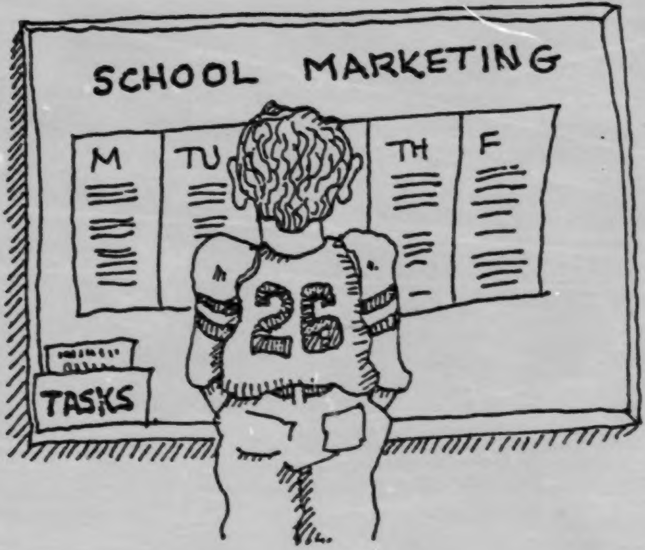
Centers may be...


FILM STRIP
LIBRARY
RULES
1
2
3
4

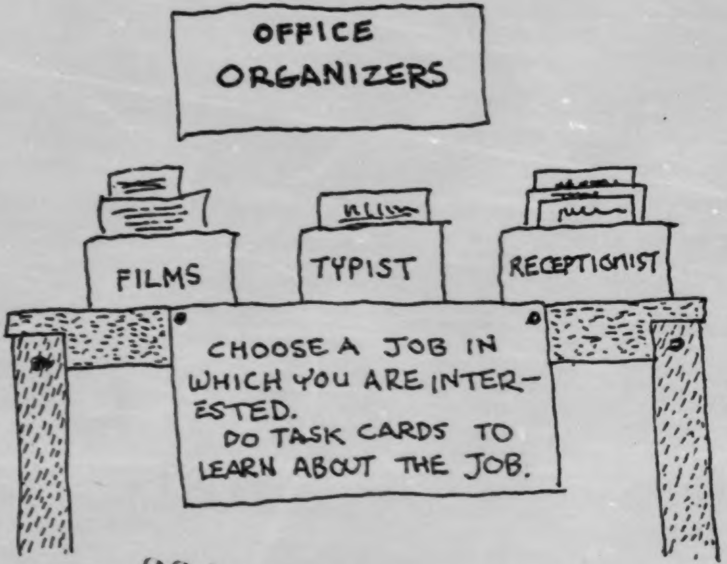
... in the hallway.


CUSTODIAN
JOB BOARD
OPENINGS


MENU
TASK CARDS


SCHOOL MARKETING
M
TU
TH
F
26
TASKS

... in the cafeteria.

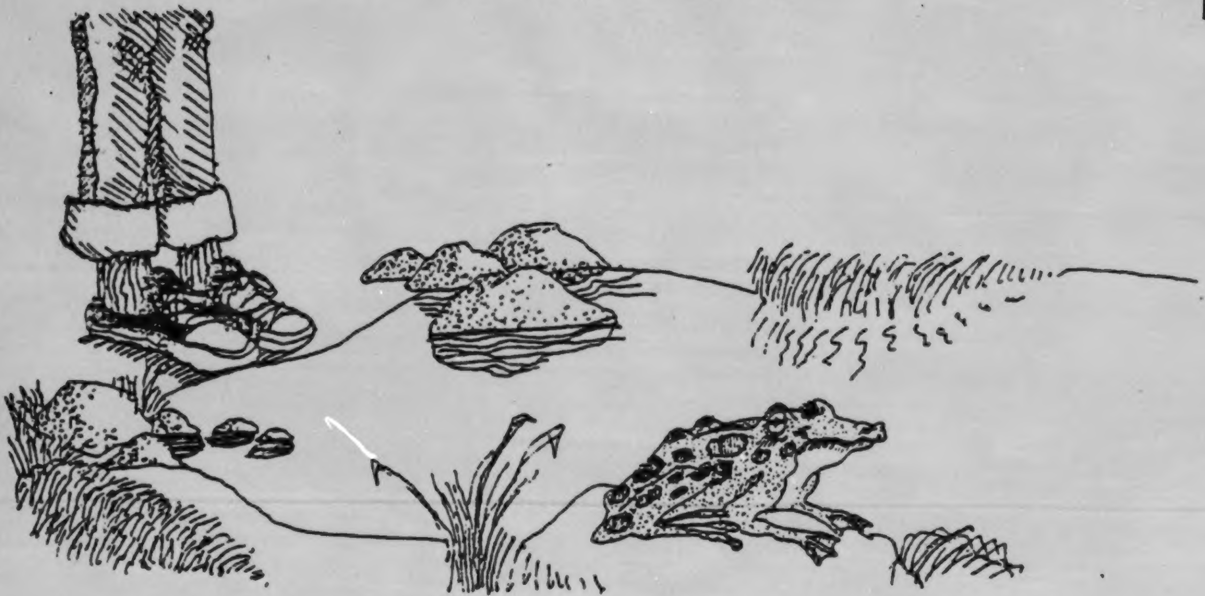

OFFICE ORGANIZERS
FILMS
TYPIST
RECEPTIONIST
CHOOSE A JOB IN WHICH YOU ARE INTERESTED.
DO TASK CARDS TO LEARN ABOUT THE JOB.

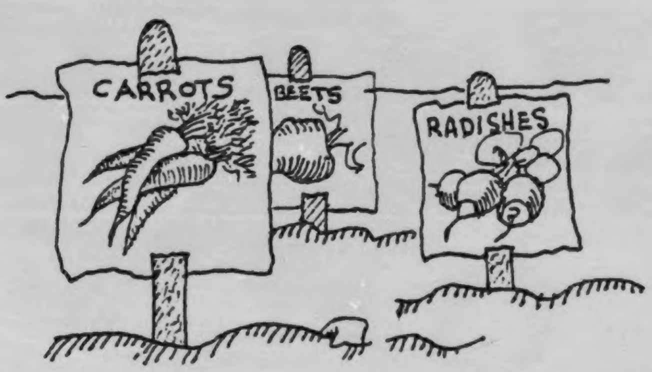
...in the office.

IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

Loft 18 - E6

H-48




CARROTS
BEETS
RADISHES

. . . outside.

HANDOUT 8

Specifications for Classroom Design

What You Have to Work With	Specifications
Classroom	30' x 40'
Students	30
Teacher	1
Teacher's Desk	1
Students' Desks	30
Bookcases	6 (3' tall, 7' long)
Easel	1
Stationary Blackboards	
Stationary Bulletin Boards	
Burlap Mats	4
Work Table	1 (8' long)
$100 to do with as you please	

Using the above specifications, try to come up with a design for a classroom which incorporates activity centers, small-group areas, and individual instruction areas.

HANDOUT 9

Summary of the Thirteen Principles of Managing Behavior

To strengthen new behavior

1. Positive Reinforcement Principle: To improve or increase a child's performance of a certain activity, arrange for an immediate reward after each correct performance.

To develop new behavior

2. Successive Approximations Principle: To teach a child to act in a manner in which he has seldom or never before behaved, reward successive steps to the final behavior.

3. Modeling Principle: To teach a child a new way of behaving, allow him to observe a prestigeful person performing the desired behavior.

4. Cueing Principle: To teach the child to remember to act at a specific time, arrange for him to receive a cue for the correct performance just before the action is expected rather than after he has performed incorrectly.

5. Discrimination Principle: To teach a child to act in a particular way under one set of circumstances but not another, help him to identify the cues that differentiate the circumstances and reward him only when his action is appropriate to the cue.

To maintain new behavior

6. Substitution Principle: To reinforce a child with a previously ineffective reward, present it just before (or as soon as possible to) the time you present the more effective reward.

7. Intermittent Reinforcement Principle: To encourage a child to continue performing an established behavior with few or no rewards, gradually and intermittently decrease the frequency with which the correct behavior is rewarded.

To stop inappropriate behavior you may choose from four alternative principles

8. Satiation Principle: To stop a child from acting in a particular way, you may allow him to continue (or insist that he continue) performing the undesired act until he tires of it.

9. Extinction Principle: To stop a child from acting in a particular way, you may arrange conditions so that he receives no rewards following the undesired act.

10. Incompatible Alternative Principle: To stop a child from acting in a particular way, you may reward an alternative action that is inconsistent with or cannot be performed at the same time as the undesired act.

11. Negative Reinforcement Principle: To stop a child from acting in a particular way, you may arrange for him to terminate a mild aversive situation immediately by improving his behavior.

To modify emotional behavior

12. Avoidance Principle: To teach a child to avoid a certain type of situation, simultaneously present to the child the situation to be avoided (or some representation) and some aversive condition (or its representation)

13. Fear Reduction Principle: To help a child overcome his fear of a particular situation gradually increase his exposure to the feared situation while he is otherwise comfortable, relaxed, secure or rewarded.

Comments:

Grandma's Law - "First you do what I want you to do and then you do what you want to do."

Beauty of the behavioral approach is that it allows you to know, not surmise. By counting behaviors or keeping records of what occurs before and after a desired/or undesired behavior, the teacher is able to pinpoint the behavior, plan a strategy for change of behavior, and evaluate whether the strategy worked.

"Those who care, count."

The behavior in your classroom is a clear indication of what you will "settle for."

IMPLEMENTING THE IEP: PROVIDING A CONDUCIVE ENVIRONMENT

Exercise

List 15 or more reinforcing or high probability behaviors which can be used with your students to reinforce their learning.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________
13. ______________________________
14. ______________________________
15. ______________________________

2. If you have time, list 5 activities such as field trips which could be planned in advance and which requir children to save up.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

3. Which of the above (or think of some other "rewards") do you think would appeal most to your identified student?

____

____

____

____

____

Contingency Contracting

Contingency contracting is a very effective technique for motivating students, and it can contribute to the development of an open learning environment. Based on the work of Lloyd Homme (1971), contingency contracting is a method of behavior management which actively involves the child in the decision-making process. A mutual agreement between the child and the teacher is specified in advance. The basic premise of the contingency contracting system is the use of reinforcing events or activities (REs) to motivate task behavior and completion. It is an exchange of student work for a significant reward activity selected by the child.

Contingency contracting was originally designed to be used with the class as a total group. We believe that this rather structured system can be successfully adapted for use in an open classroom where the teacher is concerned with the management of students as individuals rather than as a group. For a more comprehensive and detailed discussion of contingency contracting, refer to the book by Dr. Lloyd Homme listed in the references at the end of this chapter. Suggested adaptations of the contingency contracting system follow the brief adaptation of the basic group program presented below.

Contingency Contracting with a Group

The program consists of a series of *cycles*. Each cycle is divided into two parts: a task section and a reward section. In the beginning, the cycles might be about twenty minutes in length (approximately ten minutes for completion of a task, and ten minutes for participation in a reward activity). The tasks presented to the children must be easy enough to be finished successfully within about ten minutes. If some children finish in less time, they are excused immediately to the reward area and thus get some extra reward time. If other children take longer to finish their task, their reward time will not be as long. At the end of the twenty-minute cycle, *all* the children are called back at the same time (using a signal) to begin a new twenty-

Materials taken from: Volkmar, C., Langstaff, A., & Higgins, M. Structuring the Classroom for Success. Charles E. Merrill Publishing Company, Columbus, Ohio: 1974, pp. 113-131. (Reprinted with permission of Merrill Publishing Company) minute task completion/reward cycle. (See sample schedule on page 118.)

Here is how to get it started in the classroom:

1. *Devise a Menu:* a list of available RE activities. Sit down with your students and make a list of activities already available within the classroom environment. The list can also include activities that the children and/or teacher can bring in. Let the *children choose* the activities for the list, but the activities chosen should be mutually satisfactory to both the student *and* the teacher. The activities on the menu are only available to students under the terms of the contract. That is, the rewards are not available to be used under any other circumstances. (See sample menu on page 119.)

2. *Arrange the Room:* it is helpful to provide one or more areas in the room where reward activities can take place, separate from the task area. (See list of reinforcing activities on page 120.)

3. *Select a Signal:* a bell, timer, lights, etc., which will be used to call the children back from the free time or RE area. Decide on one signal that will be used consistently.

4. *A New Program:* explain to the children that there will be a new program—that they will be responsible for completing a certain task or amount of work and *as soon* as it is completed, they will have a few minutes of free time to do something they would like to do. Make a visual (overhead or chart) of the sample program and show it to the kids. (See sample program on page 121.)

5. Give the children some very simple and short tasks at first while they are learning the system. Make sure that they are tasks that the children *can* complete successfully within about ten minutes, so that the emphasis is on the program rather than the task. It is important that the children feel successful from the very beginning so the program will go on.

6. Circulate as the children are doing their task work.

7. Check off each child's work as he is finished and *immediately* excuse him to free time. (There is no need to correct the entire paper; a spot check will do.)

8. At the end of the specified time in RE areas, use a signal to call the children back for another task.

9. Begin new task and repeat task completion/reward cycle.

Helpful Hints *

Type of Tasks. Begin with the same task for all so that emphasis is on the program rather than the task.

Use short tasks at first so that emphasis is on completion and success.

Acceptable work for the individual child must be produced before he is excused to the RE areas; work with that child to set up criteria which are fair for him.

Be alert to work which is too difficult or too long. Emphasize successful completion in approximations (small steps).

Don't hesitate to cut work that is too long, but redefine limits right then and there (modify contract).

Be flexible to the interests of the child and anticipate the need to increase approximations; don't wait until he is bored.

The Signal. Be careful to respond only to appropriate signals; avoid the temptation to prompt children verbally to return to a task from the reward area.

Free Time. Be prepared for initial clustering and confusion; this begins to taper off quickly. Encourage children to work out sharing systems and group cooperation. Mediate problems on the spot.

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* This section was developed by Mrs. Jackie Damaske—a beautiful teacher and friend.

Children are to be responsible and not wasteful in the use of materials: they must learn how to operate equipment and when to seek help. Carelessness is discouraged immediately and *loss of privilege* results if necessary.

The rights of others are to be respected at all times.

Clean-Up. Emphasis should be on *immediate* return to task area.

Only hazardous things should be put up and machinery turned off. The child returns at next RE time to continue with or replace items in proper places.

Plan with children and work out the responsibility of major clean-up times.

Don't let obsessive desire for neatness be a deterrent to a successful, interesting, exciting program.

Suggestions for Preventing Undesirable Behavior. Numbers one and two (below) are *musts;* however, if they do not work, try number three, etc.

1. Undesirable behavior is ignored.

2. Desirable behavior is reinforced as much as possible.

3. Desired behavior exhibited by other children is reinforced within earshot and eyeshot of the child (modeling).

4. The child is reminded of the rights of others and the consequences for not following the basic rules, in a discussion with him individually.

5. The child may not participate in *any* activities.
   a. Work and all items he seeks to work with are removed.

b. Decision for returning to work is left up to him within specific time limits.

6. Last Resort: the child is removed to another part of the room within sight of the teacher, but isolated from others.

Whenever a confrontation is necessary, plan a time to sit and discuss it with the child when you are both more objective, so that you can renew your relationship and alleviate resentments.

If you are at Step 4 and haven't given Steps 1, 2, and 3 a good try, you are cheating yourself *and* the child.

Specific Cases and Probable Solutions. If a child continually lags behind after RE time:

1. Keep his work from him for the amount of time he lags.

2. Reinforce returning to task area with all children more frequently.

It is often effective not to allow the child to have his next task, thus cutting into his next RE time.

Be sure to explain consequences of inappropriate responses and behavior to all of the children in the class so everyone knows what is expected. Be sure to do this at the very beginning of the program *before* any problems arise.

Sample First Day Schedule* (Contingency Contracting)

TIME	ACTIVITY
9:00–9:20	Task: Introducing the System (Listening)/ RE: Reinforcement Event (unstructured)
9:20–9:40	Task: Math (simple item for each child)/RE
9:40–10:00	Task: Individual Reading/RE
10:00–10:20	Task: Returning to Seat after RE/RE: immediate dismissal to another RE time for returning to seat
10:20–10:35	Task: Recess Behavior (Lavatory)/RE
10:35–10:55	Task: Phonics Worksheet/RE
10:55–11:15	Task: Spelling/RE
11:15–11:35	Task: Perceptual Motor Skills/RE
11:35–12:30	Clean-up/Lunch
12:30–12:50	Task: Quiet Rest/RE
12:50–1:10	Task: Individual Reading/RE
1:10–1:30	Task: Fine Motor Skills (varied—pegboards, puzzles, etc.)/ RE
1:30–1:50	Task: Group Activity/RE
1:50–2:00	Task: Clean-up/Dismissal

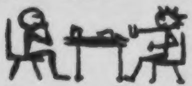
* This sample schedule is adapted from one developed by Mrs. Jackie Damaske and used with an intermediate EH class.

Sample Menu Developed by Mrs. Jackie Damaske

FREE TIME ACTIVITIES
"DO YOUR OWN THING"

◆ GAME AREA

- TINKER TOYS
- BRICKS, BLOCKS
- CONSTRUCTO-STRAWS
- HOT WHEEL TRUCKS

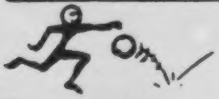


- CHESS
- CHECKERS
- CARDS
- BATTLESHIP
- PUZZLES
- DOMINOS
- BINGO
- GYROSCOPE
- COLOR FORMS
- STRANGE CHANGE MACHINE

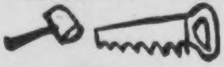
■ ART AREA

- PAINTING
- CHALK
- COLORING
- PAPER MACHÉ
- CLAY
- PLAYDOUGH
- CUT-PASTE
- YARN-WORK
- COLLAGES
- SPIROGRAPH
- COLORING PAPERS

● OUTDOOR AREA



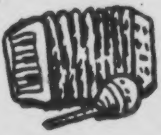
- BOUNCE BALL
- HAND BALL
- JUMP ROPE
- SWINGING
- SOFTBALL
- MONKEY BARS
- KICKBALL
- DODGEBALL



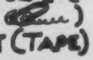
- TOOL SHED

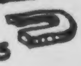
FOR GIRLS ONLY ♀

- MAKE-UP, CURLERS
- SEWING
- TEA PARTY
- PAPER DOLLS
- DOLL HOUSE
- FASHION DOLL
- MYSTERY DATE GAME



▲ ENTERTAINMENT AREA

- RECORDS (WITH )
- LISTENING POST (TAPE)
- FILMSTRIP VIEWER
- COMIC BOOKS
- LIBRARY
- SCIENCE OBJECTS
- MUSICAL INSTRUMENTS



Behavior Management in the Classroom

IMPLEMENTING THE IEP:
PROVIDING A CONDUCIVE ENVIRONMENT

List of Reinforcing Activities

This list contains some short reinforcing activities that these authors [Sulzer and Mayer] have found to be effective with young children (three to twelve years old). These can be delivered immediately or can serve as back-ups for tokens. The child should be limited to spending only a few minutes at any of these activities.

Blow up a balloon; let it go
Jump down from a high place into arms of adult
Play with typewriter
Watch train go around track
Run other equipment, such as string pull toys, light switch
Listen to own voice on tape recorder
Build up, knock down blocks
Push adult around in swivel chair
Pull other person in wagon
Look out window
Play short game; ticktacktoe, easy puzzle, connect the dots
Blow bubbles; soap, gum
Read one comic book
Write on blackboard; white or colored chalk
Paint with water on blackboard
Pour water through funnel, from one container to another, and so on
Blow out match
Comb and brush own or adult's hair
Look in mirror
Play instrument: drum, whistle, triangle, piano, and so on
Use playground equipment:
  slide, swings, jungle gym, merry-go-round, see-saw
Draw and color pictures
Cut with scissors
Model with clay, putty
Throw ball, bean bag
Climb ladder
Turn on flash light
Sit on adult's lap
Look at projected slide
Listen to short recording
Watch short film, view master, filmstrip
Walk around in high heels
Wear funny hats
Carry purse, briefcase
Roll wheeled toy down incline
Pop balloon, paper bag, milk carton
String beads
Play with magnet
Operate jack-in-the-box
Play with squirt gun
Solve codes and other puzzles
Sing a song
Listen to a song
Perform before a group; sing a song; tell a poem or riddle; do a dance, stunt or trick
BE
  hugged
  tickled
  kissed
  patted
  swung around
  turned around in swivel chair
  pushed on swing, merry-go-round
  pulled in a wagon

---

* B. Sulzer and G. R. Mayer, *Behavior Modification Procedures for School Personnel* (Hinsdale, Illinois: Dryden Press, Inc., 1972.

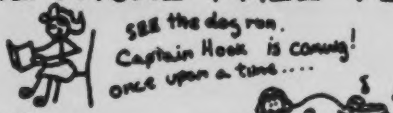
A NEW PROGRAM

1. DO A LITTLE WORK

2. HAVE SOME FREE TIME

3. DO SOME MORE WORK
4. HAVE SOME MORE FREE TIME

5. WORK


SEE the dog run.
Captain Hook is coming!
once upon a time....

6. FREE TIME

WORK IS WHATEVER IS ASSIGNED

FREE TIME IS WHATEVER YOU WANT TO DO

IF

1. YOUR WORK IS FINISHED CORRECTLY.
2. YOU DO NOT BREAK ANY SAFETY RULES.
3. YOU DO NOT BREAK ANY SCHOOL RULES.
4. YOU DO NOT TAKE AWAY THE RIGHTS OF OTHERS.

* This page can be used as a chart or overhead to explain the program to the class. Developed by Jackie Damaske.

After Basic Contingency Contracting System Is Thoroughly Familiar to Both Children and Teacher

After the first week or so it is time to plan for more individualization with assigned tasks.

Task time blocks are increased; cycles may now be thirty minutes long with twenty minutes for task completion and ten minutes for reward. (See sample eleventh day schedule on page 123.)

Tasks are combined so that easier ones are coupled with more complicated ones—tasks must still be reasonable and attainable.

Use of folders can make organization and individualization easier. (Work is inserted each day and progress evaluated according to child's own program).

The child will give you clues when he is ready to modify his contracts; the success he feels becomes reinforcing in itself, and he will seek more of it.

The menu may change; be ready to add and delete activities available for free time according to the children's interests. Keep the menu flexible.

Sample Eleventh Day Schedule* (Contingency Contracting)

TIME	ACTIVITY
9:00–9:30	Task: Meeting and Gross Motor Activity/RE
9:30–10:00	Task: Reading and Writing Practice/RE
10:00–10:30	Task: Math/RE
10:30–10:50	Task: Recess/RE
10:50–11:20	Task: Spelling and Phonics/RE
11:20–12:30	Clean-up/Lunch
12:30–1:00	Task: Rest and Listening Activity/RE
1:00–1:30	Task: Individual Reading and Fine Motor Skills/RE
1:30–1:50	Task: Group Activity (discussion and evaluation of the day and planning for tomorrow)/RE
1:50–2:00	Clean-up/Dismissal

* This sample schedule is adapted from one developed by Mrs. Jackie Damaske for use with an intermediate EH class.

Adaptations for the Open Classroom

Contingency contracting is one way of managing student behavior and of guiding children toward self-management. Many teachers have found that it is easier to get the basic system operating for a few weeks with the class as a group before attempting to adapt the program to individual student needs. Once the students are familiar with the way a contingency contracting program works, it is possible for the teacher to individualize and for the children to move toward a much more flexible use of the system. The following are some specific suggestions for moving in this direction:

I'LL TAKE THE GAMES CENTER AT 9:20, THE SCIENCE EXPERIMENT AT 10:10 AND HOLD THE ONIONS!

1. Different time schedules can be worked out with individual students; let student become involved in selecting and setting his own work goals.

2. Encourage children to use resources in the activity centers for both academic and reward activities. It may become less and less necessary to have a separate task area.

3. Utilize self-checking task materials, when possible, to eliminate the need for the teacher to check off each task.

4. Weekly contracts can be set up with individual students. A dittoed weekly schedule, Monday through Friday, with cycles for each day can be passed out to children at a Monday morning "class meeting." The task that morning is for each child to contract for a specific amount of work in each subject area to be completed by Friday. He fills in his weekly schedule; it is approved by or negotiated with the teacher, and he is on his own. He can complete his tasks in any order, schedule his own task completion/reward cycles, and check in with teacher at various points along the way.

5. Children enjoy some way of checking themselves off; it gives them an extra sense of accomplishment. Credit cards for work completed may be devised for this purpose. This gives the child a deeper feeling of commitment and responsibility. A certain amount of time may be prescribed until he earns a day off or some other congratulatory sign. (See sample work credit card at the end of the chapter.)

6. Many of the "Helpful Hints" also apply to individualized contingency contracting.

Token Systems

Token reinforcement is another example of a behavioral intervention method. Tokens are objects or symbols such as checks, points, stars, and stamps which can be exchanged for other reinforcing items or privileges at a later time. The power of the token system is dependent on the reinforcing quality of the exchange reinforcers.

Tokens are immediate symbolic rewards which the child can save and accumulate over a period of time. An advantage of the token system in the classroom is that it is relatively easy to design in such a way that all children can participate. Becker, Thomas and Carnine (1971) state the following principles as guidelines for the design of token systems in the classroom:

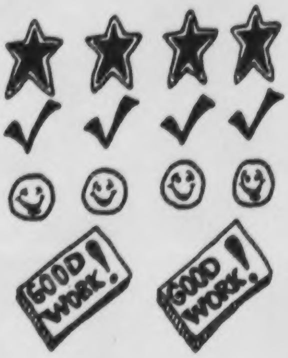
> 1. Reinforcers given immediately are more effective than delayed reinforcers. Tokens should be rapidly and easily administered.
> 2. Tokens or points serve as *conditioned reinforcers* which can be backed up by *many* effective reinforcers. The variety of back-up reinforcers increases the probability that reinforcers will be present for different children.
> 3. In building new behaviors, frequent reinforcement is desired. After behaviors are established, an intermittent schedule of reinforcement is more effective in maintaining behavior. The token system should permit continuous or intermittent presentation of tokens depending on the progress of the child.
> 4. To reduce the future need for a special reinforcement system, presentation of tokens should be paired with verbal reinforcements, such as "you're right," "good," completing a task, or just working on-task. (p. 153)

Ideas for Token Systems

Here are a few practical suggestions for operating a token system:

1. Trading stamp books can be filled with stars, stickers, gummed labels that say "good work," or happy face rubber stamp imprints.

2. Poker chips kept by each child in their own plastic container.


GOOD WORK!
GOOD WORK!

Behavior Management in the Classroom

3. Play money; students may operate a "banking system"—write checks, etc.

4. Small colorful beads which children can add to their own string.

5. Colored pegs on miniature individual pegboards.

6. Teacher-made check-mark cards.

7. Point systems with a given number of points awarded for various behaviors; e.g. completed assignment = 5 points; ready for work = 1 point.

Add Your Own Ideas

Scheduling Reinforcement

A token system in which rewards are precisely scheduled can be used to teach children to delay reinforcement. Tokens may be administered:

1. At the end of a special time period to all students whose behavior is appropriate; e.g. students who attend to task for five minutes receive one checkmark.

2. Upon partial completion of a lesson or task; e.g. Mary receives three points for each page she attempts to read orally.

3. Upon successful completion of lesson or task; e.g. Mary now receives three points for a page read *correctly*.

The level of student performance can often be increased if the teacher occasionally provides reinforcement at intermittent intervals or for varied amounts of work. See sample token system below.

Tokens can be exchanged for back-up reinforcers:

1. At the end of a specified time during the day.

2. At the end of the day, week, month, etc.

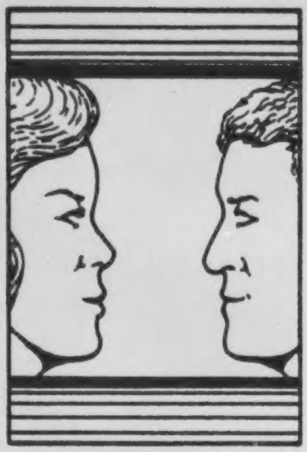
3. Upon the accumulation of a certain number of checks or points (allows for self-paced learning). See list of back-up reinforcers and sample work credit card on pages 128-29.

HOW MANY STARS DO YOU HAVE TO GET BEFORE YOU CAN GET FREETIME GENERAL?

Sample Token System

TOKEN	EXCHANGE
1 point	Pet the rabbit; package of corn nuts; open the door for visitors.
5 points	Write on the blackboard; play short game; blow bubbles.
10 points	5 minutes free time; basketball with teacher; comic book.
50 points	Feed fish for a week; 10 minutes free time.
100 points	Deck of cards; 20 minutes free time; help custodian.
500 points	Free day; special field trip; tutor in another class.

Behavior Management in the Classroom



Devise your own token system below:

TOKEN	EXCHANGE

List of Back-Up Reinforcers*

The following list contains the forty-two *back-up reinforcers* used by Campbell and Sulzer (1971) in a *token program* designed to increase reading and spelling performance by an intermediate level, educable mentally handicapped class of children.

1. Extra swim period
2. Ten minutes for a game at milk break
3. Fifteen minutes in library
4. Film on Friday
5. Field trip (available once every two weeks)
6. Feed fish for a week
7. Choose story
8. Ride elevator
9. Turn filmstrip projector
10. Turn off lights
11. Five minutes writing on chalkboard
12. Crafts activity
13. Put blinds up or down
14. Leader in line
15. Get milk at break
16. Pass out milk at break
17. Pass out straws at break
18. Distribute milk at noon
19. Carry library books upstairs
20. Carry library books downstairs
21. Run errands by the day
22. Pull down screen
23. Erase and wash chalkboard
24. Clean erasers
25. Captain of team at recess

Behavior Management in the Classroom

26. First up to bat at recess
27. Lead the pledge
28. Take care of calendar by the week
29. Sit at teacher's desk for reading
30. Sit at teacher's desk for spelling
31. File Peabody cards
32. Pass out paper
33. Pass out scissors
34. Buy extra straws
35. First in line for drink at recess
36. Help collect displays, and so on for units
37. Time in science laboratory
38. Help custodian
39. Answer telephone day by day
40. Make phone calls
41. An extra cookie at break
42. Help secretary get milk for other classrooms

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* B. Sulzer and G. R. Mayer, *Behavior Modification Procedures for School Personnel* (Hinsdale, Illinois: Dryden Press, Inc., 1972).

Sample Work Credit Card*

Date	Reading	Writing	Math	Spelling	Puzzle	Perceptual Activity
10-28	✓	✓	✓	✓	✓	✓
10-29	✓	✓	✓	✓	✓	✓
10-30	✓	✓	✓	✓	✓	✓
Extra						

✓ = work completed or work satisfactory

* Adapted from a sample work credit card provided by Jackie Damaske.

Summary of Major Procedures for Classroom Management

1. Identify for yourself, and later with the child, the specific behavior to be changed.

2. List reinforcing events for individual students—or ask the child. Remember the classroom contains hundreds of events that are reinforcing to children. Anything that increases the frequency of desired behavior is a reinforcer.

3. Devise a strategy to promote the appearance of desired behavior; reinforce immediately.

4. Remember that new behaviors are not learned all at once; reinforce the child for approximations of terminal behavior (e.g. partially correct responses).

5. It is usually a good idea to start the response requirement at or slightly below the level at which the child is presently functioning. This procedure reduces the risk of the child being unsuccessful and not receiving a reward.

6. Design opportunities for the child to practice the new behavior.

7. Schedule rewards so that the child gradually learns to delay reinforcement.

8. Use reinforcing events (activities, privileges, free time) to reinforce desired responses. If concrete reinforcers or tokens are necessary, be sure they are accompanied by social reinforcement (smile, praise, or encouragement).

9. Be sure that behavioral contracts are clearly understood by the student—that he knows exactly what he must do in order to receive a specific reinforcement.

10. Focus on desired behavior and reinforce frequently. Desired behaviors are those which are incompatible with responses we want to eliminate.

11. Ignore inappropriate or undesired behavior unless someone is getting hurt.

12. The teacher's behavior (attention, scolding, gestures) may be reinforcing persistent undesired responses. Examine your *own* behavior to determine if you are inadvertently reinforcing inappropriate behaviors in children.

Behavior Management in the Classroom

13. Provide opportunities for the child to display new behaviors in situations other than the one in which the behavior was originally learned, and reinforce him for doing so.

14. Remember that the use of punishment to manage behavior produces unwanted side effects such as escape, avoidance and negative feelings; therefore, use punishment only as a last resort.

15. If denial or isolation is used, be sure that the activities being denied or the environment from which the child is excluded is reinforcing to him in the first place. Otherwise, denial or "time out" will actually be positive reinforcers.

16. Always try to be fair and consistent; children will respect you for this.

Behavior Management in the Classroom References

Becker, Wesley C., Siegfried Englemann, and Don R. Thomas. *Teaching a Basic Course in Applied Psychology*. Champaign, Illinois: Englemann-Becker Corp., 1970.

Part I: Behavior Modification, Strengthening, Weakening and Maintaining Behavior.

Part II: Concepts and Operations—Teaching the General Case.

In programmed format, comes complete with exercise booklets.

Becker, Wesley C. *Parents Are Teachers—A Child Management Program*. Champaign, Illinois: Research Press Co., 1971.

Detailed account of all elements of behavior management. Includes many practical examples of the use of this system in the home and classroom.

Harless, J. H. and C. S. Lineberry. *Turning Kids On and Off*. Springfield, Va.: Guild V Publications, 1971.

A self-instructional programmed book covering most of the basics of behavior modification, motivation, and contingency management in a clear, straightforward format.

Homme, Lloyd. *How to Use Contingency Contracting in the Classroom*. Champaign, Illinois: Research Press Co., 1971.

Programmed paperback on principles of contingency management. Discusses self-contracting and classroom organization.

Krumboltz, John D. and Helen B. Krumboltz. *Changing Children's Behavior*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

Behavioral principles are illustrated with examples based on real-life situations. An extremely practical and readable book which demonstrates how a broad range of complex behavior problems may be analyzed into simpler behaviors which may be modified.

Mager, Robert. *Preparing Instructional Objectives*. Palo Alto, Calif.: Fearon Publishers, 1962.

Classic source on how to state educational objectives. Programmed format with self test.

Mager, Robert. *Goal Analysis*. Palo Alto, Calif.: Fearon Publishers, 1969.

A programmed, self-instructional booklet on the five points of defining and using objectives.

MacDonald, W. Scott. *Battle in the Classroom: Innovations in Classroom Techniques*. Scranton: Intext Educational Publishers, 1971.

An approach to behavior management honed by the acid test—in-classroom experience. As much a book about an approach to evaluating your classroom techniques as about the techniques themselves.

Patterson, Gerald R., and M. Elizabeth Gullion. *Living with Children: New Methods for Parents and Teachers*. Champaign, Illinois: Research Press, 1968.

A short, practical, programmed instructional booklet on a social learning theory approach to behavior change.

Valett, Robert E. *Effective Teaching: A Guide to Diagnostic-Prescriptive Task Analysis*. Belmont, Calif.: Fearon, 1970.

Eight programs on such topics as planning for individual needs, task analysis, contracts for learning, motivating students, and negative reinforcement and punishment.

OTHER REFERENCES

HANDOUT 11

STUDY GUIDE ON CONTINGENCY CONTRACTING

1. Name the two parts of each cycle in a program of contingency contracting.

2. The use of __________ ______ is the basic premise of the contingency contracting system.

3. Name three suggestions for preventing undesirable behaviors.

4. Name several reinforcers you would consider using in your classroom.

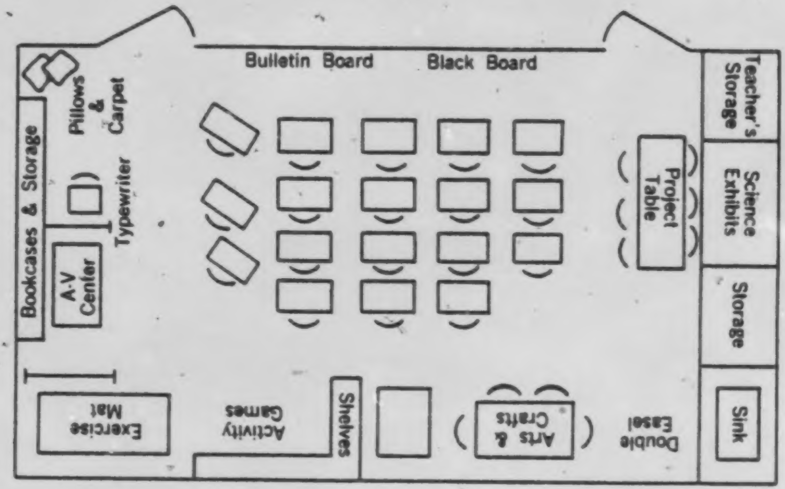
COMPONENTS OF LEARNING ENVIRONMENT

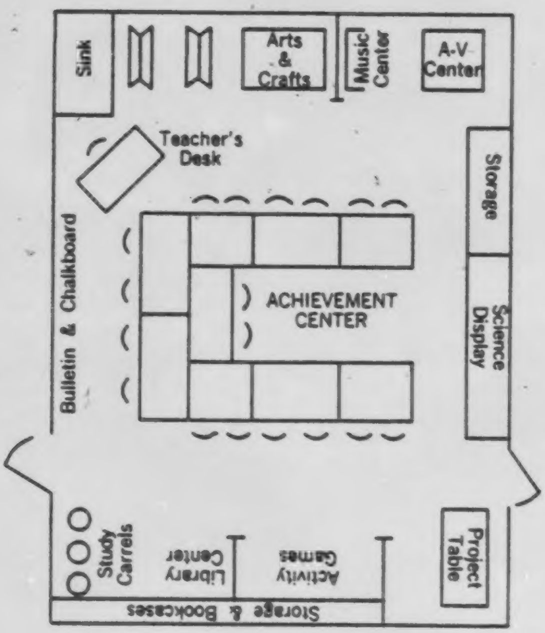
1. TEACHING STYLE
2. LEARNING STYLES
3. PHYSICAL ENVIRONMENT
4. MANAGEMENT

IMPLEMENTING THE IEP
PROVIDING A CONDUCIVE ENVIRONMENT

T-2

Sample Room Plans

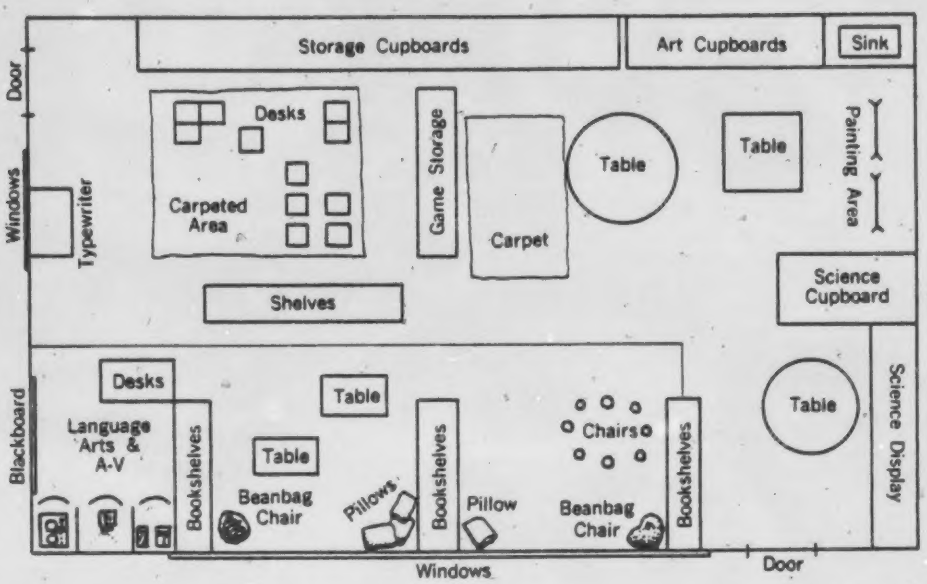

Bulletin Board
Black Board
Teacher's Storage
Science Exhibits
Storage
Sink
Project Table
Double Easel
Arts & Crafts
Shelves
Activity Games
Exercise Mat
Bookcases & Storage
A-V Center
Typewriter
Pillows & Carpet

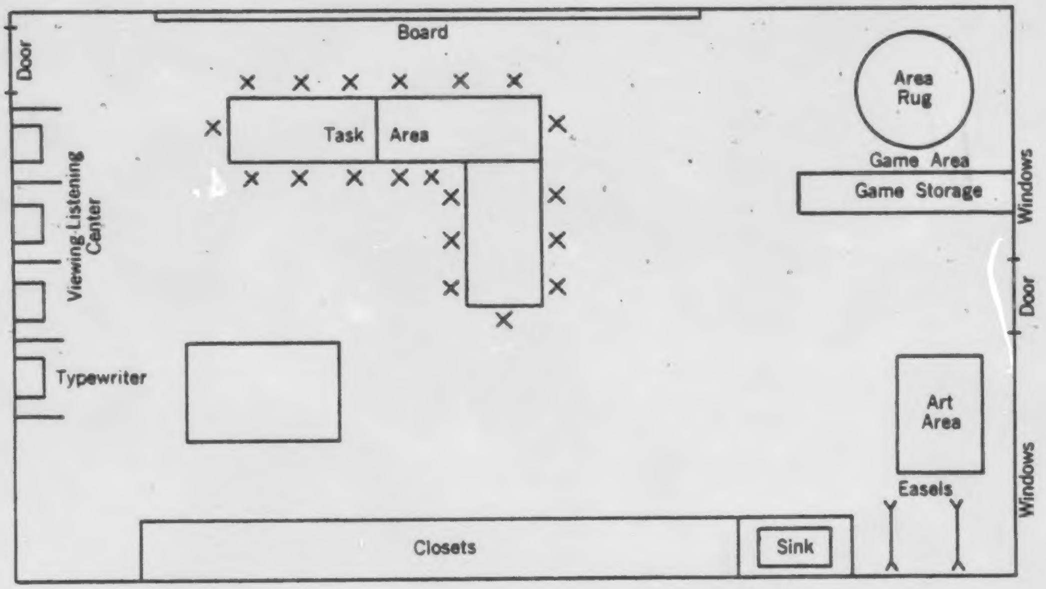

Sink
Arts & Crafts
Music Center
A-V Center
Teacher's Desk
Storage
Science Display
ACHIEVEMENT CENTER
Bulletin & Chalkboard
Study Carrels
Library Center
Activity Games
Project Table
Storage & Bookcases

Room Environment

Taken from: Volkmar, C., Langstaff, A., & Higgins, M. Structuring the Classroom for Success. Charles E. Merrill Pub. Co., Columbus, Ohio: 1974. p. 28. (Reprinted with permission of Merrill Publishing Co.)

IMPLEMENTING THE IEP
PROVIDING A CONDUCIVE ENVIRONMENT


Storage Cupboards
Art Cupboards
Sink
Door
Windows
Typewriter
Desks
Carpeted Area
Game Storage
Carpet
Table
Table
Painting Area
Shelves
Science Cupboard
Desks
Table
Language Arts & A-V
Blackboard
Bookshelves
Table
Beanbag Chair
Pillows
Bookshelves
Pillow
Chairs
Beanbag Chair
Bookshelves
Table
Science Display
Windows
Door


Board
Door
Task Area
Area Rug
Game Area
Game Storage
Windows
Viewing-Listening Center
Door
Typewriter
Art Area
Easels
Windows
Closets
Sink

Room Environment

Taken from: Volkmar, C., Langstaff, A., & Higgins, M. Structuring the Classroom for Success. Charles E. Merrill Publishing Co., Columbus: 1974. p. 29. (Reprinted with permission of Merrill Publishing Co.).

HANDOUT 11

ANSWER SHEET FOR STUDY GUIDE ON CONTINGENCY CONTRACTING

1. Name the two parts of each cycle in a program of contingency contracting.
   (task and reward)

2. The use of reinforcing events is the basic premise of the contingency contracting system.

3. Name three suggestions for preventing undesirable behaviors.
   (see p. of handout)

4. Name several reinforcers you would consider using in your classroom.

IMPLEMENTING THE IEP:
NOW YOU HAVE IT, HOW DO YOU USE IT?

IEP IMPLEMENTATION:
NOW YOU HAVE IT, HOW DO YOU USE IT?

USAGE SUMMARY

Purpose: To integrate and implement the previously presented components into a workable plan designed to facilitate student instruction.

Objectives: Upon completion of this unit the participants will be able to:

- --specify consequences to increase a student's learning of a skill
- --list some alternatives which could be employed for a student who is having difficulty mastering a sequence.
- --recommend some suggestions for changing instructional procedures based on a student's modality.

Materials: Handouts 1-8

Transparencies 1-6

Aids: Overhead projector and screen

Presentation Format: Large group lecture, small group task

Time: Two hours

PRESENTATION OUTLINE

I. Considerations for Instructional Programming
   A. Lesson plans should include:
      1. whether the plan is for individual or large group instruction
      2. content of lesson
      3. how to be delivered and by whom
      4. what response is expected from student
      5. what materials are to be used
      6. description of teaching procedures employed
      7. demonstration of lesson elements

II. Use of consequences
   A. positive consequences increase behavior
   B. negative consequences decrease behavior

III. Decide how to collect data to indicate whether student is meeting specified criteria
   A. Determine how often to collect data
   B. Determine length of time data are to be collected
   C. Determine who will collect data
   D. Determine tools to be used to count

IV. Determining when criterion is reached
   A. Mastery occurs when skill is demonstrated as specified in objective
   B. Signs of trouble (when progress is slow)
      1. Compare present performance with previous rate of mastery
      2. Examine the trend of data
      3. Observe non-verbal off-task or avoidance behavior or negative comments from student

PRESENTATION OUTLINE (cont.)

V. Intervention Strategies

   A. When intervention is necessary at acquisition stage

   B. When intervention is necessary at proficiency stage

SCRIPT TEXT

IF YOU HAVE BEEN THROUGH THE EARLIER COMPONENTS OF IMPLEMENTING THE IEP YOU HAVE INVESTIGATED THE PROCESS OF DECIDING WHAT TO TEACH AND HOW TO TEACH; YOU HAVE CHOSEN AND MATCHED MATERIALS AND ESTABLISHED AN ENVIRONMENT REASONABLY CONDUCIVE TO LEARNING. NOW IS THE TIME TO GET IT TOGETHER FOR YOUR STUDENT. TEACH THE TASK!

THERE ARE SOME THINGS TO BE CONSIDERED BEFORE YOU BEGIN TO TEACH THE TASK. THEY ARE LISTED FOR YOU ON THIS HANDOUT.

PASS OUT HANDOUT 1 (H-1-2)

BEFORE YOU BEGIN TO TEACH YOU WILL WANT TO PREPARE A LESSON PLAN. LESSON PLANS SHOULD INCLUDE:

1. WHETHER THE PLAN IS FOR INDIVIDUAL OR LARGE GROUP INSTRUCTION
2. CONTENT OF LESSON
3. HOW TO BE DELIVERED AND WHO WILL DELIVER
4. WHAT RESPONSE IS EXPECTED FROM STUDENT
5. WHAT MATERIALS ARE TO BE USED
6. DESCRIPTION OF TEACHING PROCEDURES EMPLOYED
7. DEMONSTRATION OF LESSON ELEMENTS

EXAMPLES OF EACH OF THESE POINTS HAVE BEEN GIVEN ON THE HANDOUT. TAKE A MOMENT TO REVIEW IT. ARE THERE ANY QUESTIONS?

RESPOND TO PARTICIPANTS' QUESTIONS.

IEP IMPLEMENTATION:
NOW YOU HAVE IT, HOW DO YOU USE IT?

ONCE YOUR LESSON PLAN HAS BEEN PREPARED, YOU ARE READY TO TEACH THE SKILL. YOU HAVE ALREADY ESTABLISHED A SEQUENCE OF SKILLS TO BE TAUGHT SO YOU KNOW WHAT THE STUDENT MUST BE TAUGHT. HOWEVER, IN ORDER TO BEGIN THE INSTRUCTION, YOU MUST PROVIDE DIRECT INSTRUCTION AT THE FIRST POINT IN THE INSTRUCTIONAL SEQUENCE WHERE THE STUDENT DOES NOT DEMONSTRATE PROFICIENCY. IN PROVIDING THIS INSTRUCTION, LET'S REVIEW WHAT WE KNOW OF DIRECT INSTRUCTION AND BEHAVIOR MANAGEMENT.

WHEN WE WANT A STUDENT TO INCREASE SKILLS, WE KNOW THE USE OF CONSEQUENCES (WHAT HAPPENS AFTER THE BEHAVIOR) IS AN APPROPRIATE WAY TO CONTROL THIS INCREASE.

FOR EXAMPLE, IF A STUDENT IS LEARNING TO READ A LIST OF WORDS AND THE TEACHER PRAISES HIM/HER FOR CORRECT RESPONSES IT IS LIKELY THAT THE NUMBER OF CORRECT RESPONSES WILL INCREASE. PRAISE, IN THIS INSTANCE, SERVES AS A POSITIVE CONSEQUENCE. IF, HOWEVER, THE STUDENT MAKES AN ERROR AND THE TEACHER EITHER SCOLDS OR GIVES A FROWNING FACE, THEN THE NUMBER OF ERRORS IS LIKELY TO DECREASE. SCOLDING, THEN, BECOMES A NEGATIVE CONSEQUENCE. HOWEVER, BE AWARE THAT ERRORS WILL DECREASE ONLY IF THE CHILD IS CAPABLE OF MAKING THE CORRECT RESPONSE.

THIS TRANSPARENCY ILLUSTRATES SOME GUIDELINES FOR USING CONSEQUENCES. I WILL DISCUSS EACH POINT WITH YOU. YOU MAY ALSO USE THIS HANDOUT FOR REFERENCE AS I PROCEED WITH THE DISCUSSION.

PASS OUT HANDOUT 2 (H-3)

SHOW TRANSPARENCY 1 (T-1)

READ EACH POINT ON THE TRANSPARENCY AS FOLLOWS:

1. PROVIDE CORRECTIVE AND PERFORMANCE FEEDBACK TO THE CHILD. IT IS CRITICAL THAT THE STUDENT RECEIVE BOTH CORRECTIVE AND PERFORMANCE FEEDBACK ON HIS/HER RESPONSES. CORRECTIVE FEEDBACK TO THE STUDENT INDICATES WHICH RESPONSES ARE CORRECT, WHICH ARE INCORRECT, AND HOW THE ERRONEOUS RESPONSES CAN BE CORRECTED. PERFORMANCE FEEDBACK FOCUSES ON THE NUMBER OF CORRECT RESPONSES AND HOW THE CHILD IS PROGRESSING IN RELATIONSHIP TO THE GOAL.

   A. WHEN THE STUDENT IS FIRST LEARNING THE SKILL, THE ACQUISITION STAGE, FEEDBACK ON PERFORMANCE IS CRUCIAL. THAT FEEDBACK SHOULD BE SPECIFIC AND CAREFULLY STATED SO THAT THE STUDENTS HAVE A CLEAR IDEA OF WHAT HAS BEEN DONE CORRECTLY AND WHAT ERRORS THEY HAVE MADE.

      RESPONSES LIKE "THAT'S GOOD" OR "THAT'S GREAT" GENERALLY ARE NOT TOO HELPFUL IN INCREASING DESIRED PERFORMANCES. THE STUDENT NEEDS TO BE TOLD EXACTLY WHAT S/HE DID TO EARN THE PRAISE. FOR EXAMPLE, "YOU BLENDED ALL OF YOUR SOUNDS TOGETHER QUICKLY, THAT IS VERY GOOD." OR, "YOU ANSWERED THE QUESTION WITHIN

30 SECONDS, THAT'S GREAT!" WHEN THE STUDENT IS TOLD WHY THE RESPONSE IS GOOD THEN THAT BECOMES DEFINITE INFORMATION WHICH CAN BE USED TO REPEAT THE RESPONSE.

THE INSTRUCTIONAL MATERIALS FOR THE MILDLY HANDICAPPED BOOKLET WHICH YOU RECEIVED EARLIER HAS SOME SUGGESTIONS FOR CORRECTIVE FEEDBACK ON PAGES 59 & 60. YOU MAY REFER TO IT LATER.

B. DURING THE PROFICIENCY STAGE, WHEN THE CHILD IMPROVES HIS/HER ACCURACY AND RATE OF RESPONSE, PERFORMANCE FEEDBACK SHOULD BE PROVIDED ON THE STUDENT'S PROGRESS TOWARD MEETING THE GOAL. COMMUNICATION OF A CHILD'S PROGRESS INCLUDES COMMUNICATING PRESENT PERFORMANCE IN RELATIONSHIP TO PAST PERFORMANCE, AND PRESENT PERFORMANCE IN RELATIONSHIP TO A GOAL. A CHILD SHOULD BE AWARE OF THIS GOAL IN PERFORMANCE. S/HE SHOULD KNOW THE LEVEL OF PERFORMANCE YOU ARE DEMANDING BEFORE MOVING TO A NEW SKILL. THIS COMMUNICATION OF PROGRESS WILL OFTEN ADD NEEDED MOTIVATION TO SKILL PERFORMANCE. THE USE OF SELF-CHARTING OR GRAPHING IS OFTEN A VERY EFFECTIVE TECHNIQUE AT THIS POINT. THE CHILD CAN KEEP A DAILY RECORD OF HER PERFORMANCE ON A GIVEN TASK. BY CHARTING PERFORMANCE, THE CHILD WILL RECEIVE IMMEDIATE FEEDBACK ON HOW HE/SHE IS PROGRESSING TOWARD THE GOAL.

C. IF FEEDBACK IS TO SUCCESSFULLY ALTER THE STUDENT'S RESPONSES THEN IT SHOULD BE PROVIDED IMMEDIATELY FOLLOWING THE RESPONSE. CORRECT RESPONSES ARE LIKELY TO OCCUR IF FEEDBACK IS IMMEDIATE.

IMMEDIATE FEEDBACK IS ESPECIALLY NECESSARY AT THE PROFICIENCY STAGE BECAUSE THE CHILD IS WORKING ON INDEPENDENT ACTIVITIES AND THE TEACHER IS NOT THERE TO GIVE THE FEEDBACK. THEREFORE, SOME PROVISIONS MUST BE MADE FOR CORRECTIVE FEEDBACK. THESE PROVISIONS COULD INCLUDE: (1) CORRECTION KEYS FOR ASSIGNMENTS (EXACT DUPLICATES OF ASSIGNMENTS WITH ANSWERS ADDED), (2) A CORRECTION TABLE WHERE KEYS FOR ALL ASSIGNMENTS GIVEN THAT DAY ARE KEPT, (3) A CORRECTION PUPIL WHO ASSISTS THE CHILD TO CORRECT THE WORK AND TO RECORD DATA FROM THE ASSIGNMENT, AND (4) THE USE OF AN AIDE OR VOLUNTEER TO PROVIDE FEEDBACK ON PERFORMANCE.

D. PROVIDE FEEDBACK FREQUENTLY IN THE CLASSROOM SO THAT THE STUDENT MAKES THE ASSOCIATION BETWEEN THE FEEDBACK AND HIS/HER RESPONSE. IT IS ESPECIALLY NECESSARY TO HAVE TIME SCHEDULED FOR VERBAL CORRECTIVE FEEDBACK WHEN THE CHILD IS IN THE PROFICIENCY STAGE. DURING A FIFTEEN MINUTE SESSION, YOU CAN CALL INDIVIDIAUL CHILDREN TO YOUR DESK TO REVIEW CERTAIN ASSIGNMENTS OR YOU MIGHT RETURN THE PREVIOUS DAY'S

WORK AND RESTATE AROUND THE ROOM SUPPLYING VERBAL CORRECTIVE FEEDBACK TO REINFORCE THE WRITTEN FEEDBACK GIVEN ON THE PAPER.

2. PROVIDE CONTINGENT CONSEQUENCES FOLLOWING PERFORMANCE OF RESPONSES

CONTINGENT CONSEQUENCES MEAN THAT YOU HAVE ESTABLISHED A RULE WHICH STATES EXACTLY WHAT WILL OCCUR AFTER A SPECIFIC CHILD RESPONSE. FOR EXAMPLE, YOU MAY STATE: "FOR EVERY TEN CORRECT ANSWERS TO ARITHMETIC PROBLEMS, JOHN WILL RECEIVE A SMILING FACE."; "WHEN RON SPELLS ALL OF HIS SPELLING WORDS CORRECTLY, HE MAY CHOOSE A BOOK FROM THE READING TABLE TO READ."; "FOR EACH INCORRECT ARITHMETIC RESPONSE, HAL WILL REWORK TEN SIMILAR PROBLEMS BEFORE HE GOES TO RECESS."; "FOR EACH LETTER POORLY PRINTED, CAROLE WILL WRITE THE LETTER CORRECTLY FIFTEEN TIMES." FOR CONTINGENT CONSEQUENCES TO BE EFFECTIVE, BE CONSISTENT AND PRECISE IN ENFORCING THE RULE.

A. POSITIVE CONSEQUENCE IS ANY EVENT WHICH TENDS TO INCREASE THE BEHAVIOR THAT IT FOLLOWS. POSITIVE CONSEQUENCES MAY INVOLVE THINGS LIKE VERBAL PRAISE, SMILES, STARS, ETC. WHETHER AN EVENT IS DEFINED AS A POSITIVE CONSEQUENCE DEPENDS ON WHETHER IT INCREASES THE BEHAVIOR. THEY ARE ALWAYS DEFINED IN TERMS OF THEIR EFFECT ON THE RECEIVER.

B. YOU MUST BE SYSTEMATIC AND CONSISTENT IN THE USE OF CONSEQUENCES. OTHERWISE YOU MIGHT FIND THAT YOU ARE REWARDING UNWANTED BEHAVIORS.

C. THE NECESSITY OF IMMEDIATE REINFORCERS HAS ALREADY BEEN NOTED. HOWEVER, IF THE GOAL IS TO HAVE A STUDENT DELAY GRATIFICATION, THEN TOKENS, CHECK MARKS, ETC. CAN BE USED TO HELP THE CHILD LEARN TO WAIT FOR REINFORCEMENT WHILE AT THE SAME TIME THEY PROVIDE IMMEDIATE REINFORCEMENT FOR BEHAVIOR.

D. THIS IS ANOTHER CRITICAL FACTOR IN THE USE OF REINFORCERS. IF THE REINFORCER IS VERY LARGE (E.G., 18 TIMES, "GOOD LISTENING"), THE CHILD WILL BECOME TIRED OF THE REINFORCER. IF IT IS TOO SMALL, (ONE CHECK MARK AFTER COMPLETING 100 PROBLEMS) THEN THE REINFORCER WILL NOT BE POWERFUL ENOUGH TO INCREASE OR EVEN MAINTAIN THE DESIRED BEHAVIOR.

E. BE VERY CAREFUL TO REINFORCE ONLY THE DESIRED BEHAVIORS. CONSISTENCY IS VERY IMPORTANT.

F. YOU CAN DECREASE INAPPROPRIATE (ERROR) RESPONSES BY DISPENSING UNPLEASANT EVENTS. FOR EXAMPLE, BY FOCUSING ON INCORRECT RESPONSES, YOU CAN HAVE THE CHILD OVER PRACTICE THE CORRECTIONS TO HIS/HER ERRORS. THIS LABOR IS GENERALLY AN UNPLEASANT EVENT FOR MOST CHILDREN AND BEHAVIORS FOLLOWED BY AN UNPLEASANT EVENT TEND TO DECREASE. BEHAVIOR DECREASES ONLY IF THE CHILD IS CAPABLE OF CORRECT RESPONSE.

THE USE OF NEGATIVE EVENTS HAS MANY DANGEROUS ASPECTS. IF YOU USE ONLY NEGATIVE THINGS IN THE CLASSROOM, THE ATMOSPHERE BECOMES TENSE AND THE PERFORMANCE LEVEL OF THE CHILDREN DECREASES. ADDITIONALLY, SINCE YOUR ATTENTION IS A VERY POWERFUL INFLUENCE ON CHILDREN, EVEN NEGATIVE ATTENTION IS BETTER THAN NO ATTENTION. AT TIMES CHILDREN BEHAVE IN WAYS THAT WILL CAUSE THEM TO RECEIVE ATTENTION, NEGATIVE OR POSITIVE. A GOOD RULE OF THUMB IS: FOR EVERY TIME NEGATIVE ATTENTION IS GIVEN, FOLLOW WITH FOUR POSITIVE INTERACTIONS FOR THE CORRECT CHILD RESPONSE. MOST IMPORTANTLY, NEGATIVE CONSEQUENCES ONLY DECREASE BEHAVIORS; NO NEW BEHAVIOR IS LEARNED. POSITIVE CONSEQUENCES INCREASE CORRECT BEHAVIORS.

IN CONCLUSION, POSITIVE CONSEQUENCES--TEACHER PRAISE, ETC., FOLLOWING A RESPONSE INCREASES THE LIKELIHOOD OF THE RESPONSE OCCURRING AGAIN. NO CONSEQUENCE--(I.E., IGNORING), OR NEGATIVE RESPONSES (E.G., EMBARRASSMENT) DECREASE THE LIKELIHOOD OF THE RESPONSE RECURRING.

ARE THERE ANY QUESTIONS?

RESPOND TO PARTICIPANTS' QUESTIONS.

WE HAVE SEEN THE NECESSITY OF PROVIDING DIRECT INSTRUCTION AND THE USE OF CONSEQUENCES TO INCREASE THE LEARNER'S SKILL. OUR

NEXT CONCERN SHOULD BE WHETHER THE STUDENT IS ACTUALLY MASTERING THE MATERIAL.

IN THE PROCESS OF SELECTING AND WRITING SHORT-TERM OBJECTIVES, CRITERIA FOR MASTERY WERE ESTABLISHED. NOW WE MUST IMPLEMENT THE DATA COLLECTION TO DETERMINE WHETHER THE INSTRUCTION IS EFFECTIVE. REMEMBER, WHEN THE STUDENT DOESN'T MAKE PROGRESS, THE FAULT USUALLY LIES IN THE INSTRUCTION. THE STEPS TO BE FOLLOWED IN IMPLEMENTING A DATA COLLECTION SYSTEM ARE ILLUSTRATED ON THE NEXT TRANSPARENCY.

SHOW TRANSPARENCY 2 (T-2)

DISCUSS EACH POINT AS FOLLOWS:

1. OPTIONAL DATA COLLECTION IS DAILY; MINIMAL COLLECTION IS 2 TIMES PER WEEK.
2. LENGTH OF TIME IS INFLUENCED BY DIFFERENT FACTORS, INCLUDING FREQUENCY AND PATTERNS OF BEHAVIOR AND AVAILABILITY OF STAFF. A GOOD RULE TO USE IN DETERMINING THE AMOUNT OF TIME DURING WHICH TO COLLECT DATA IS THE RULE OF TEN. SELECT A TIME PERIOD IN WHICH YOU CAN OBSERVE TEN OF WHAT YOU ARE COUNTING. LOWER FREQUENCY BEHAVIORS MAY REQUIRE ONGOING COUNTING AND OBSERVATION.
3. IN A CLASSROOM WHERE THE CHILDREN CAN COUNT AND READ, YOU HAVE THREE CHOICES AS DATA COLLECTORS: (1) TEACHERS OR SUPPORT PERSONNEL, (2) CHILDREN ON WHOM DATA IS COLLECT, AND (3) OTHER STUDENTS.

4. COUNTING PROCEDURES WILL DEPEND ON THE TYPE OF BEHAVIORS BEING MEASURED. FOR BEHAVIORS WHICH OCCUR LESS FREQUENTLY, TEACHER OR STUDENT MAY SIMPLY TALLY THE NUMBER OF OCCURRENCES. MASKING TAPE ON THE WRIST OR WRIST COUNTERS MAY BE USED.

THERE ARE TWO MAJOR CONSIDERATIONS IN RECORDING THE DATA WHICH HAVE BEEN COLLECTED: RECORDING SHOULD BE DONE CONSISTENTLY AND THERE SHOULD BE A PLACE TO RECORD THE RAW DATA. BOTH OF THESE RULES ARE DESIGNED TO ENSURE THAT DATA COLLECTIONS ARE NEITHER LOST NOR FOGOTTEN. THIS HANDOUT WILL PROVIDE ADDITIONAL INFORMATION REGARDING THE KIND OF DATA THAT CAN BE COLLECTED AND HOW TO COLLECT THE DATA.

PASS OUT HANDOUT 3 (H4-6)

IN ORDER TO DETERMINE WHETHER THE STUDENT HAS MASTERED THE MATERIAL YOU WOULD SIMPLY NEED TO NOTE WHETHER THE CHILD HAS MET THE CRITERION SPECIFIED IN THE SHORT TERM OBJECTIVES. WHEN TEACHERS USE WELL-FORMULATED SHORT-TERM OBJECTIVES WITH SPECIFIC CRITERIA FOR MASTERY, THIS TASK BECOMES QUITE EASY. AS SOON AS THE CHILD HAS DEMONSTRATED THE SKILL LEVEL STATED IN THE OBJECTIVE, BEGIN INSTRUCTION ON THE NEXT SKILL IN THE SEQUENCE.

SHOW TRANSPARENCY 3 (T-3)

GO OVER EACH STEP SEQUENTIALLY.

IF, ON THE OTHER HAND, THE STUDENT HAS NOT MASTERED THE SKILL AND YOU DETERMINE THAT HIS/HER PROGRESS IS UNSATISFACTORY, CHANGES MUST BE MADE IN THE INSTRUCTIONAL PROGRAM. THERE ARE SEVERAL WAYS TO DETERMINE IF A STUDENT IS NOT PROGRESSING SATISFACTORILY. THESE ARE ILLUSTRATED ON THE NEXT TRANSPARENCY.

SHOW TRANSPARENCY 4 (T-4)

DISCUSS EACH POINT AS FOLLOWS.

1. COMPARE PRESENT PERFORMANCE WITH PREVIOUS RATE OF MASTERY. FOR EXAMPLE, IF THE STUDENT REACHED MASTERY ON HIS FIVE TIMES TABLES IN FIVE DAYS BUT AFTER 16 DAYS HE'S STILL ON HIS SIX TIMES TABLES, THE IMPLEMENTER SHOULD CONSIDER CHANGING THE INSTRUCTIONAL PROGRAM. HOWEVER, CONSIDER THE STUDENT.
2. EXAMINE THE TREND OF DATA. FOR EXAMPLE: A TEACHER HAS SELECTED FOR ONE STUDENT A SHORT-TERM OBJECTIVE OF 50 CORRECT WORDS A MINUTE ON ORAL READING; AFTER SIX CONSECUTIVE DAYS AT 15 WORDS A MINUTE THE TEACHER MIGHT CONSIDER A CHANGE.
3. DIRECT VERBAL COMMENTS FROM THE STUDENT AND NON-VERBAL OFF-TASK BEHAVIORS INDICATE A CHANGE MAY BE NEEDED.

IT IS NOT ENOUGH TO SIMPLY RECOGNIZE SIGNS OF TROUBLE IN MASTERY OF THE MATERIAL. THE TEACHER MUST DETERMINE IF MASTERY HAS NOT OCCURRED AT THE ACQUISITION OR PROFICIENCY STAGE OF LEARNING. REMEMBER THAT CHANGES IN PROGRAM SHOULD ALWAYS BE BASED ON DOCU-

MENTATION OF FAILURE TO MASTER THE TASK.

WHEN THE PROGRAM IS INEFFECTIVE DURING THE ACQUISITION STAGE THE IMPLEMENTER SHOULD LOOK AT BOTH THE DIRECT INSTRUCTION AND THE PRACTICE PROVIDED.

WAYS TO MODIFY DIRECT INSTRUCTION INCLUDE:

(1) SIMPLIFYING INSTRUCTION
(2) ALTERING VISUAL STIMULI
(3) STRESSING OTHER MODALITIES
(4) USING ALTERNATIVE DEMONSTRATIONS

WAYS TO ALTER PRACTICE ACTIVITIES INCLUDE:

(1) ADDING VERBAL CUES
(2) PHYSICALLY ASSISTING THE STUDENT IN PERFORMING THE TASK
(3) RESTORING PROMPTS THAT HAVE BEEN FADED
(4) PROVIDING ADDITIONAL TIME FOR PRACTICE

THIS TRANSPARENCY SHOWS PROGRAM MODIFICATIONS TO BE MADE WHEN THE PROGRAM IS INEFFECTIVE DURING THE ACQUISITION STAGE.

SHOW TRANSPARENCY 5 (T-5)

GO THROUGH STEPS.

PARTICULARLY STRESS THE PROCEDURES TO BE USED WHEN THE PROGRAM IS INEFFECTIVE.

IEP IMPLEMENTATION:
NOW YOU HAVE IT, HOW DO YOU USE IT?

IF PROGRESS IS SLOW OR RETENTION DOES NOT OCCUR AT THE PROFICIENCY STAGE, MODIFICATION MIGHT INCLUDE:

(1) ALTERING PRACTICE ACTIVITIES
(2) INCREASING OR DECREASING PRACTICE TIME
(3) PROVIDING MORE VARIED SELECTION OF PRACTICE MATERIALS
(4) ALTERING THE CONSEQUENCES OF THE RESPONSE

SHOW TRANSPARENCY 6 (T-6)

GO THROUGH STEPS.

PARTICULARLY STRESS THE PROCEDURES TO BE USED WHEN THE PROGRAM IS INEFFECTIVE.

ARE THERE ANY QUESTIONS?

RESPOND TO PARTICIPANTS' QUESTIONS.

YOU WILL NOW HAVE AN OPPORTUNITY TO MAKE PRACTICAL APPLICATION OF THE MATERIAL PRESENTED THUS FAR. YOU ARE TO FORM GROUPS OF 4. YOU WILL EACH BE GIVEN TWO READINGS ON INTERVENTION TECHNIQUES AND AN ACTIVITY SHEET. PLEASE READ THESE MATERIALS AND THEN RESPOND TO THE ACTIVITY SHEET. YOU ARE TO WORK TOGETHER TO ARRIVE AT THE ANSWERS FOR EACH QUESTION. ONE PERSON SHOULD THEN COMPLETE THE RESPONSE SHEET. YOU HAVE ½ HOUR FOR THIS TASK.

IEP IMPLEMENTATION:
NOW YOU HAVE IT, HOW DO YOU USE IT?

DIRECT PARTICIPANTS TO FORM GROUPS OF FOUR AS ABOVE. PASS OUT HANDOUTS 4 AND 7 TO TWO PERSONS. PASS OUT HANDOUTS 5 AND 6 TO THE OTHER PEOPLE IN THE GROUP. PASS OUT HANDOUT 8 TO EACH GROUP.

AFTER ½ HOUR ASK SEVERAL PARTICIPANTS TO GIVE THEIR RESPONSES FROM THE ACTIVITY SHEET.

HANDOUT 1

Considerations for Instructional Programming

Plan Sheets Written:
- (1) each individual student/each program
- (2) each group instructional program

Content Includes:
- (1) materials
- (2) location
- (3) time of day
- (4) teaching procedures
- (5) antecedents/cues
- (6) student behavior/responses
- (7) feedback/consequences
- (8) measurement procedures

Instructional Delivery:
- (1) small group
- (2) entire class
- (3) one-to-one
- (4) independent
- (5) self- or machine-directed

Instructional Personnel:
- (1) resource room teacher
- (2) volunteer
- (3) peer
- (4) self-directed
- (5) aide
- (6) student teacher

Student Response during Instruction and Practice:
- (1) oral
- (2) written
- (3) motor

Materials Used during Instruction and Practice:
- (1) blackboard
- (2) overhead transparencies
- (3) chart
- (4) flashcards
- (5) textbook/workbook
- (6) worksheet

*Source: SCAT Project training developed by S. Shoemaker & C. McGuigan.

Teaching Procedures Employed:

(1) modeling
(2) shaping
(3) drill--routine
(4) drill--novel
(5) slicing back
(6) positive reinforcement--tangible
(7) positive reinforcement--social
(8) positive reinforcement--token
(9) contingency contracting
(10) ignoring inappropriate behavior
(11) punishment
(12) restraint
(13) time-out procedures

Teaching: Lesson Elements Demonstrated

(1) gaining student attention prior to beginning
(2) informing learner(s) of objectives/tasks
(3) recall/review of previously presented materials
(4) presentation of new stimulus materials
(5) "learning guidance"--information presentation
(6) demonstration of appropriate response
(7) eliciting of response/cues for response
(8) feedback--reinforcement
(9) feedback--corrective procedures
(10) feedback--knowledge of response (incorrect)
(11) opportunities for practice/drill (10+ times)
(12) transfer/generalization exercise
(13) closure/summary of lesson
(14) directions for "next step" activity

HANDOUT 2

GUIDELINES FOR USING CONSEQUENCES

1. PROVIDE CORRECTIVE AND PERFORMANCE FEEDBACK TO THE CHILD.
    - A. During acquisition stage, provide the child with corrective feedback on how to alter incorrect responses.
    - B. During proficiency stage, provide the child with performance feedback on progression toward his/her goal.
    - C. When possible, provide all feedback immediately following the response.
    - D. Provide feedback frequently within the classroom.

2. PROVIDE CONTINGENT CONSEQUENCES FOLLOWING PERFORMANCE OF RESPONSES.
    - A. Provide positive consequences when the child responds correctly.
    - B. Be sure that you have control over when and how the reinforcing event is given.
    - C. Select reinforcers that can be dispensed immediately after the desired response.
    - D. Select reinforcers that are appropriate to the responses demanded (neither too small nor too big for the response).
    - E. Be sure that the reinforcers are contingent on the desired child behavior.
    - F. Balance any negative consequences with a number of positive interactions.

HANDOUT 3

DATA COLLECTION

TYPES OF DATA	COUNTING PROCEDURES	TIMING PROCEDURES	RECORDING PROCEDURES	EQUIPMENT
Percent	Count each correct or error response Count total # of responses	None	# correct responses or # error responses Total # of responses	Tally sheet (low frequency Double bank counter
Rate	Count total number of correct responses and total number of error responses	Note length of session: start watch or timer after first cue is given; stop timer or stop watch at end of a predesignated length of time (e.g., 1 minute)	Record # Correct responses Record # error responses Record length of session	Stop watch, timer, clock, other time base device Tally sheet (correct and error columns) Double bank counter
Duration	# of times measures were taken (# of trials)	Start watch when behavior begins, stop watch when behavior ends	Length of time behavior lasts	Stop watch or clock; other time-based device (not a timer)
Latency	# of times measures were taken (# of trials)	Start watch after cue is given, stop watch when behavior starts	Length of time between cue and start of behavior	Stop watch or clock
Levels of Assistance	# of trials at each level of assistance that pupil exhibits desired response	A time factor can be built into the definition of a correct response at each level of assistance (e.g., when given a verbal cue, pupil responds within 5 seconds)	# trials at each level of assistance that pupil exhibits	Tally system containing one category for each assistance level

HANDOUT 3

Task 8: Implement data collection procedures and monitor progress

After a decision has been made to use data collection procedures (see Task 4), some procedures must be established to implement the measurement system. These steps are ones to be followed in the implementation of a data collection system (Lynch, Flanagan, Penell, 1977).

1. Determine how often to collect data on the behavior. Optimal data collection occurs daily, minimal data collection occurs two times a week.

2. Determine the length of time data will be collected. The length of time data will be collected is influenced by different factors, including: the frequency and pattern of the behavior and the amount of time spent with each child for a given task (which is determined by the availability of the classroom or other professional staff).

   Generally, the higher the frequency of a behavior the shorter the length of time required for data collection. A rule to use in determining the amount of time during which to collect data is called the Rule of Ten. Select a time period during which you can observe at least 10 of the behaviors you are counting.

   In contrast, the lower the frequency of a behavior, the longer the length of time required for data collection. Low frequency behaviors probably occur at widely spaced time intervals; therefore, a short data collection time might cause behaviors to be missed because the sample may be taken at the "wrong" time--when the behavior is not occurring.

3. Determine who will collect the data. In a classroom in which the children can count and read numbers, three choices of data collectors exist: (a) the teacher, support personnel, aide(s), etc., (b) the pupils on whom data are being collected, or (3) another pupil. While the teacher is usually a reliable data collector, the amount of time necessary to collect data on 20 pupils may be impossible or undesirable. The use of pupils as data collectors may be desirable from the teacher's standpoint not only for the time savings but to actively involve pupils in their own educational progress.

   When pupils cannot assume any of the data collection responsibility, it is necessary to prioritize programs on which to collect data and to simplify data collection methods as much as possible.

4. Determine the counting, timing and recording procedures and/or tools to be used. The counting procedures you use will depend on the types of behaviors being measured. For behaviors which occur infrequently and are easily observed, the teacher (or pupil) can simply tally the number of occurrences on a piece of paper. An alternate method is to tally the number of occurrences on a piece of masking tape attached to clothing or around the wrist. Wrist counters (the type used by golfers and available at sporting goods stores) can also be employed for counting.

For frequent behaviors, such as "read words", the number of responses can be counted after the task is completed or a predetermined number of responses can be presented to the pupil (e.g., a 100-word reading selection can be assigned for oral reading). Equipment is also available for this purpose. A simple gate counter is available at most hardware stores which can be used to tally number of responses while the behavior is occurring or afterwards.

Wall clocks, wrist watches, or digital clocks with second hands are the most readily available timing devices in the classroom. The teacher can simply look at the clock and begin counting a response (or tell the pupil to begin a task) and, after a predetermined amount of time, stop. For long time samples, it is often difficult to keep close track of the time. Relatively inexpensive kitchen timers with loud bells are extremely useful for this purpose as well.

There are two major considerations in recording the data that have been collected: recording should be consistently carried out, and there should be a specified place to record the raw data. Both of these rules are designed to ensure that data collections are neither lost nor forgotten.

A regular pattern for recording data should be established and followed. For some teachers it is easiest to record data immediately after they are collected throughout the school day. Others prefer to wait until after school to record the data that have been collected that day, but "raw scores" which are collected on academic, preacademic and self-help skills (e.g., puts on jacket) should be recorded immediately. The place for recording the data may be as simple as a notebook kept on the teacher's desk for that purpose. Other possibilities include individual data sheets attached to each pupil's desk or kept in pupil notebooks. The point to remember is that the choice of data recording procedures should be made according to what is easy to implement and maintain in the classroom. (See the following table for a summary of counting procedures, timing procedures, and equipment needed).

HANDOUT 4

INSTRUCTIONAL TASK DESIGN

Every child is an individual with his own "best" way of learning, and we should teach to that "best" way. Some important considerations to keep in mind are:

Achievement Level: Not all eight-year-olds can read the same material, handle the same math problems, spell the same words, etc. We have students below average in these achievements as well as at average and above.

Input Modalities: Some children learn best through their ears or through listening (auditory modality), some learn best through their eyes (visual modality), and still others learn most efficiently through touching and feeling or manipulating (haptic modality).

Output Modalities: There are children who can express themselves best by giving their responses orally (auditory modality). Others find writing or drawing (visual-motor modality) an easier way to communicate their answers, and some children would prefer to show you their responses by acting them out, making a model, or demonstrating (haptic and motor modalities).

Grouping Needs: Some students work best alone and without distractions. Some students learn best in groups.

Variety Needs: These needs can range from requiring lots of variety or novelty in activities to requiring time to explore one activity thoroughly before moving to a new one.

Motivational Needs: Some children can be motivated to complete an academic assignment through the assignment itself. These youngsters find such assignments intrinsically rewarding. Other children will do the same work if it will bring teacher approval--a smile, verbal or written praise. Others will work only for free time or tangibles.

Practice Needs: Some students need massed practice, or practice that is concentrated in large blocks of time. Others need their practice spread out over short periods, or spaced.

Cognitive Level: Students vary in their ability to handle cognitive questions. Knowledge questions may be a challenge to some while others need questions requiring comprehension, application, analysis, synthesis, or evaluation.

Reasoning Style: Some children reason best inductively, others deductively.

There are other considerations, but the above suffice to give a feeling for the enormity of the task of teaching each child according to his "best" learning style.*

*Contributed by Dr. Judy Grayson, Master Teacher and Teacher Trainer, Duarte Unified School District, California.

Taken from: Volkmor, C., & Langstaff, A. Structuring the classroom for success. Columbus, OH: Charles E. Merrill, 1974, pp. 144-146.

HANDOUT 5

HOW TO "FIX UP" SEQUENCES

Slicing Back is:

Dividing a set of materials into several smaller parts and using only those parts on which the child has demonstrated some ability to progress.

The basic skill remains the same but covers a smaller range.

It's generally better than moving back to a more elementary skill.

EXAMPLE

Decodes CVC words with all short vowels

Slice back to:

decodes CVC words with short a
decodes CVC words with short i
decodes CVC words with short o
decodes CVC words with short e
decodes CVC words with short u

OR

Jump Ahead by:

combining skills

eliminating skills

overlapping skills

If there are gaps or missing steps, write in the additional appropriate steps.

SAMPLE SEQUENCES

SKILL: ADDITION COMPUTATION

Entry Skills: see Addition Facts

Sequence Steps:

1. 2-digit + 1-digit, no regrouping
2. 2-digit + 2-digit, no regrouping
3. 3-digit + 1-digit, no regrouping
4. 3-digit + 2-digit, no regrouping
5. 3-digit + 3-digit, no regrouping

6. addition of three 1-digit numbers, sums to 10
7. addition of four 1-digit numbers, sums to 10

8. 2-digit + 1-digit, regroup to the tens
9. 2-digit + 2-digit, regroup to the tens
10. 3-digit + 1-digit, regroup to the tens

11. 3-digit + 1-digit, regroup to tens and hundreds
12. 3-digit + 2-digit, regroup to tens
13. 3-digit + 2-digit, regroup to hundreds
14. 3-digit + 2-digit, regroup to all columns
15. 3-digit + 3-digit, regroup to tens
16. 3-digit + 3-digit, regroup to hundreds
17. 3-digit + 3-digit, regroup to all columns

18. addition of three 1-digit, sums greater than 10
19. addition of four 1-digit, sums greater than 10
20. addition of three 2-digit, no regrouping
21. addition of four 2-digit, no regrouping
22. addition of three 3-digit, no regrouping
23. addition of four 3-digit, no regrouping
24. addition of three varying digits, no regrouping

25. addition of three 2-digit, regrouping
26. addition of four 2-digit, regrouping
27. addition of three 3-ditit, regrouping
28. addition of four 3-digit, regrouping
29. addition of three with varying digits, regrouping

1. $\begin{array}{r}43\\+\ 2\\\hline 45\end{array}$ 2. $\begin{array}{r}34\\+25\\\hline 59\end{array}$ 3. $\begin{array}{r}421\\+\ 3\\\hline 424\end{array}$ 4. $\begin{array}{r}863\\+\ 34\\\hline 897\end{array}$ 5. $\begin{array}{r}603\\+295\\\hline 898\end{array}$ 6. $\begin{array}{r}2\\+\ 3\\1\\\hline 6\end{array}$ 7. $\begin{array}{r}4\\0\\+\ 1\\2\\\hline 7\end{array}$

8. $\begin{array}{r}33\\+\ 9\\\hline 42\end{array}$ 9. $\begin{array}{r}39\\+27\\\hline 66\end{array}$ 10. $\begin{array}{r}436\\+\ 8\\\hline 444\end{array}$ 11. $\begin{array}{r}498\\+\ 9\\\hline 507\end{array}$ 12. $\begin{array}{r}639\\+25\\\hline 664\end{array}$ 13. $\begin{array}{r}572\\+\ 84\\\hline 656\end{array}$

14. $\begin{array}{r}467\\+\ 99\\\hline 566\end{array}$ 15. $\begin{array}{r}62\end{array}$ 16. $\begin{array}{r}492\\+285\\\hline 777\end{array}$ 17. $\begin{array}{r}549\\+783\\\hline 1337\end{array}$

SKILL: SUBTRACTION COMPUTATION

Entry Skills: see Subtraction Facts

Sequence Steps:

1. 2-digit minus 1-digit, no regrouping
2. 2-digit minus 2-digit, no regrouping
3. 3-digit minus 1-digit, no regrouping
4. 3-digit minus 2-digit, no regrouping
5. 3-digit minus 3-digit, no regrouping

6. 2-digit minus 1-digit, regroup from tens
7. 2-digit minus 2-digit, regroup from tens
8. 3-digit minus 1-digit, regroup from tens
9. 3-digit minus 1-digit with zero in tens place, regroup from tens and from hundreds
10. 3-digit minus 2-digit, regroup from tens
11. 3-digit minus 2-digit, regroup from hundreds
12. 3-digit minus 2-digit, (no zeros in tens)
13. 3-digit minus 2-digit, with zero in tens, regr
14. 3-digit minus 3-digit, regroup from tens
15. 3-digit minus 3-digit, regroup from hundreds
16. 3-digit minus 3-digit, regroup (no zeros in te
17. 3-digit minus 3-digit with zero in tens place of minuend, regroup

1. $\begin{array}{r}24\\-3\\\hline 21\end{array}$ 2. $\begin{array}{r}49\\-28\\\hline 21\end{array}$ 3. $\begin{array}{r}429\\-\ 7\\\hline 422\end{array}$ 4. $\begin{array}{r}875\\-34\\\hline 841\end{array}$ 5. $\begin{array}{r}987\\-624\\\hline 363\end{array}$ 6. $\begin{array}{r}42\\-9\\\hline 33\end{array}$

7. $\begin{array}{r}56\\-28\\\hline 28\end{array}$ 8. $\begin{array}{r}396\\-9\\\hline 387\end{array}$ 9. $\begin{array}{r}908\\-\ 9\\\hline 899\end{array}$ 10. $\begin{array}{r}472\\-39\\\hline 433\end{array}$ 11. $\begin{array}{r}423\\-92\\\hline 331\end{array}$ 12. $\begin{array}{r}472\\-96\\\hline 376\end{array}$

13. $\begin{array}{r}506\\-97\\\hline 409\end{array}$ 14. $\begin{array}{r}472\\-349\\\hline 123\end{array}$ 15. $\begin{array}{r}527\\-153\\\hline 374\end{array}$ 16. $\begin{array}{r}722\\-379\\\hline 343\end{array}$ 17. $\begin{array}{r}507\\-279\\\hline 228\end{array}$

HANDOUT 6

Intervention Notes

There are two major intervention considerations:

(1) How do you decide when to change?
(2) What are the things that you can change?

Entry skills for interventions:

(1) charting aims
(2) drawing program guidelines
(3) drawing phase-change lines

1. To analyze your data you need to utilize a decision rule. Examples of data decision rules that have been used in the past are:

   2-day decision rules for number correct and errors
   ***3-day decision rules for number correct and errors
   meet/beat decision rules for number correct and errors
   no program guideline/3-day below or meet for number correct
   no program guideline/3-day above or meet for errors

   ***This is the rule that we suggest you utilize when you are just starting data analysis.

   The 3-day decision rule

   --Intervene (change) when number correct falls below the program guideline 3 consecutive days.

   --Intervene (change) when errors rise above the program guideline 3 consecutive days.

   --record that a change is being made with a phase-change line

   --record on that phase-change line what the change is

2. What are the things you can change?

   (1) the instructional program, or
   (2) the motivational considerations

   Instructional:

   *Change the location of the instruction

   (1) from the regular classroom to the resource room
   (2) from the resource room to the regular classroom
   (3) to a different place in the room
   (4) by changing spatial position in relation to the student/s

Source: Materials developed by Diane Bevis, Support Competency Assistance Training (SCAT) Project, Boise, Idaho

*Change the time of the instruction

(1) during the day e.g.,
(2) by increasing, 5-minute drill extended to 15 minutes
(3) by decreasing, e.g., 30-minute drill shortened to 10 minutes

*Change the materials

(1) from/to the blackboard
from/to the overhead screen
from/to flash cards
from/to workbook/testbook
from/to worksheet
etc.
(2) by changing auditory cues:
controlled speaking
volume
(3) by changing the format:
  (a) larger writing
  (b) fewer problems per page
  (c) colored paper
  (d) ordering of materials or content
  (e) vertical or horizonal position
(4) by changing the amount covered

*Change the personnel

(1) from regular classroom teacher doing instruction to resource room teacher doing instruction
(2) from the resource room teacher doing the instruction to the regular classroom teacher
(3) from/to the aide
(4) from/to peer tutor
(5) from/to resource room teacher

*Change in the objectives

(1) by modifying the long-term objective
(2) by modifying the short-term objective
(3) by modifying the steps of the sequence (slicing back).
(4) by modifying the steps of the sequence (jumping ahead).
(5) (change student's placement in the instructional sequence).

*Change in the instructional delivery

(1) by changing the size of the group
(2) from/to large group
(3) from/to small group
(4) from/to team
(5) from/to 1:1
(6) from/to self-directed
(7) from/to independent

NOW YOU HAVE IT, HOW DO YOU USE IT?

*Change the student response during instruction and practice

(1) from/to oral
(2) from/to written
(3) from/to motor

*Change teaching procedures

(1) by changing the modeling procedures:
    (a) verbal
    (b) motor
    (c) written
(2) by changing the cueing procedures:
    (a) verbal
    (b) motor
    (c) written
(3) by changing the shaping procedures
(4) by changing the amount of instruction:
    (a) skipping ahead
    (b) slicing back
    (c) errors only
(5) by changing the reinforcement schedule for instruction
(6) by changing reinforcements:
    (a) from/to social
    (b) from/to tangible
    (c) from/to symbolic
(7) by ignoring inappropriate behavior
(8) by changing instruction introductions:
    (a) ways to gain student attention
    (b) information about day's objective
    (c) review and recall procedures
    (d) warm-up procedures
(9) by changing types of information:
    (a) new
    (b) old/new
    (c) errors only
(10) by changing feedback:
    (a) reinforcement
    (b) correction procedures
    (c) ignore or consequate incorrect responses
(11) by changing opportunities for practice/drill
    (a) increase
    (b) decrease
    (c) errors only
(12) by changing closure/summary of lesson
(13) by changing direction for next step activity

*Change measurement procedures

(1) by changing counting procedures
(2) by changing recording procedures
(3) by changing assessment trials-to continuos
(4) by changing aims:
  (a) no aim
  (b) aim too high
  (c) aim too low
(5) by time change:
  (a) too long--no endurance
  (b) too short--too little time to exhibit

Motivational

*Change the kinds of consequences

(1) student preference:
  (a) choice
  (b) amount
(2) teacher preference:
  (a) choice
  (b) amount
(3) by changing the types:
  (a) social--praise, attention, ignoring, hugs
  (b) symbolic--happy cards, stars, checks, graphs
  (c) tangible--use of free time, games

*Change ratio between behaviors and consequences

(1) more or less behavior based on amount of response
(2) more or less behavior based on time

*Change motivation procedures

(1) by comparing previous day's performance before timing
(2) by changing warm-up procedures for timings
(3) by letting students chart own data
(4) by letting peers time peers and chart data
(5) by letting the regular classroom teacher do the timing
(6) by letting the child set own aims.

THERE ARE MANY, MANY MORE INTERVENTIONS, BUT THIS SHOULD GIVE YOU A GOOD START.

HANDOUT 7

Source: Mirkin, P.K., & Deno, S.L. Basic instructions in data-based instructions. Minneapolis: University of Minnesota Department of Special Education, 1974.

Data-Based Instruction: Specific Procedures

1. Pinpoint specific behaviors to be modified and pinpoint exactly where instruction should begin by making an initial assessment in areas where student is experiencing difficulty, recording this behavior for four or five days. This is called baseline rate of performance and is based upon task analysis of skills in specific curriculum areas. (In some instances, such as reading, placement tests are also administered.)

2. Use standard calendar days chart or daily behavior chart to record results of daily measures of pinpoint behavior. Write daily plan at top of chart.

3. Label vertical axis with specific behaviors to be measured, number of pages read, number of problems completed, number of behaviors per minute.

4. Label horizontal axis with dates of instruction.

5. Establish criteria for plotting a mastery point or for recording number of behaviors per minute.[1]

6. Progress goals are established on the basis of:
    a. the number of tasks it is necessary for the student to complete each day (or week) if he is to reduce the discrepancy between present and expected performance.
    b. setting a ceiling for an expected frequency of behavior (per minute).

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[1] Failure to achieve mastery on a given day is plotted on the same horizontal axis as a previous day's point. More than several successive horizontal plots signal need for Rapid Change.

7. Length of instructional intervention may vary anywhere from five to approximately fifteen days.

8. Change procedures should be implemented if student is not progressing at projected rate of progress or at least twice his past rate of progress.

9. Change is based on average rate of progress or median (if daily behavior chart), not on a given day's test results.

10. Decisions regarding changes in program are determined by the following questions:

   a. Are there instructional variables which will affect performance?
   b. Are there reinforcement variables which will affect performance?
   c. Are there other environmental modifications which will affect performance?

11. Try not to change more than one variable at a time, keeping other variables constant so as to examine the effect of the specific change on behavior.

12. Changes are always indicated on a chart by drawing a line halfway between last day of instruction and first day of change. (See graphs.)

13. Average rate of progress per day is summarized during each intervention. This summary is written on the graph within a tear drop and spaced approximately halfway through change. (See graphs.)

14. New alternatives are continually tried until student performance reaches goal. The effect of changes on performance are measured.

15. Summative evaluation of progress may be performed at any given time.

Examples of Change Procedures

Environmental Variables:

Change from classroom to resource room for instruction on an individual basis.

Change from classroom teacher as instructor to resource teacher as instructor in the regular classroom on an individual basis.

Change from large- to small-group instruction in the regular classroom with resource teacher as instructor.

Change from large- to small-group instruction with classroom teacher as instructor.

Change from classroom teacher as instructor to aide, peer tutor, or volunteer as instructor, with regular classroom teacher as manager.

Change from resource teacher as instructor to aide, peer tutor, or volunteer as instructor, with resource teacher as manager.

Instructional Variables:

Change in stated behavioral objectives, accuracy, amount of material to be covered.

Change in placement of student in the instructional sequence.

Change in procedure to be used in presenting material to student.

Change in program from one curriculum to another.

Change in program from one type of material to another.

Incentive Variables:[1]

Change in the way in which student receives feedback regarding his academic and social behavior.

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[1] It would be exceedingly difficult to present an exhaustive list of possible incentive variables. The reader is referred to such books as Classroom management: The successful use of behavior modification, by O'Leary & O'Leary; Contingency contracting, by Lloyd Homme; The humanization process, by Hamblin, Buckholdt, et al., for in-depth analysis. (See Bibliography for complete reference.)

Change in arrangement of behavioral consequences (events following performance).

a. Social reinforcement: teacher praise, attention, peer praise, attention; ignoring undesirable behavior.

b. Secondary or symbolic reinforcement: stars, tokens, checks, points on graphs given regularly or intermittently.

c. Tangible reinforcement: food, games, use of free time, self-management of program, use of group contingencies.

HANDOUT 8

Activity Sheet

Task 1

Hector will be taught to compute 3-digit + 1-digit numbers, regroup to tens and hundreds.

What positive consequences can be used to accelerate learning of the skill? (List some.)

Task 2

Hector hasn't been working on the following sequence step for 3 days and the number of errors has exceeded the number of corrects. What would you do? (List several alternatives.)

3-digit + 1-digit, regroup to tens

Task 3

Hector's teacher has been using a phonetic approach to increase basic word recognition. He just doesn't seem to get it. What can you suggest to help her?

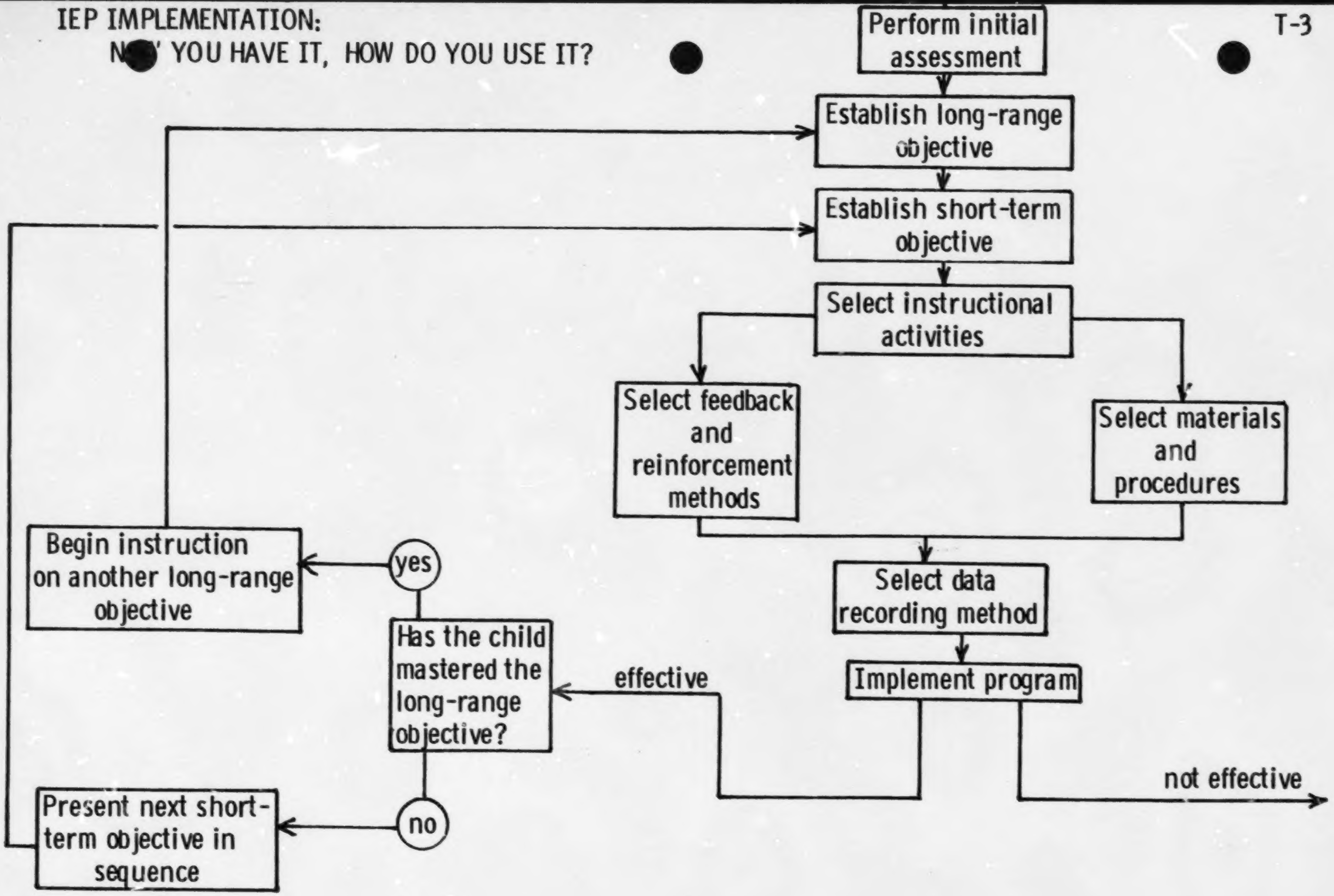
GUIDELINES FOR USING CONSEQUENCES

1. PROVIDE CORRECTIVE AND PERFORMANCE FEEDBACK TO THE CHILD.
    - A. During acquisition stage, provide the child with corrective feedback on how to alter incorrect responses.
    - B. During proficiency stage, provide the child with performance feedback on progression toward his/her goal.
    - C. When possible, provide all feedback immediately following the response.
    - D. Provide feedback frequently within the classroom.
2. PROVIDE CONTINGENT CONSEQUENCES FOLLOWING PERFORMANCE OF RESPONSES.
    - A. Provide positive consequences when the child responds correctly.
    - B. Be sure that you have control over when and how the reinforcing event is given.
    - C. Select reinforcers that can be dispensed immediately after the desired response.
    - D. Select reinforcers that are appropriate to the responses demanded (neither too small nor too big for the response).
    - E. Be sure that the reinforcers are contingent on the desired child behavior.
    - F. Balance any negative consequences with a number of positive interactions.

STEPS TO IMPLEMENT DATA COLLECTION

1. DETERMINE HOW OFTEN TO COLLECT DATA ON THE BEHAVIOR.
2. DETERMINE THE LENGTH OF TIME DATA WILL BE COLLECTED.
3. DETERMINE WHO WILL COLLECT THE DATA.
4. DETERMINE THE COUNTING, TIMING, AND RECORDING PROCEDURES AND/OR TOOLS TO BE USED.

IEP IMPLEMENTATION:
NOW YOU HAVE IT, HOW DO YOU USE IT?



Perform initial assessment

Establish long-range objective

Establish short-term objective

Select instructional activities

Select feedback and reinforcement methods

Select materials and procedures

Select data recording method

Implement program

effective

not effective

Has the child mastered the long-range objective?

yes

Begin instruction on another long-range objective

no

Present next short-term objective in sequence

Systematic Instructional Procedures to be Used When Program is Effective

SIGNS OF TROUBLE

1. COMPARE PRESENT PERFORMANCE WITH PREVIOUS RATE OF MASTERY.
2. EXAMINE THE TREND OF DATA.
3. DIRECT VERBAL COMMENTS FROM THE STUDENT AND NON-VERBAL OFF-TASK BEHAVIORS.

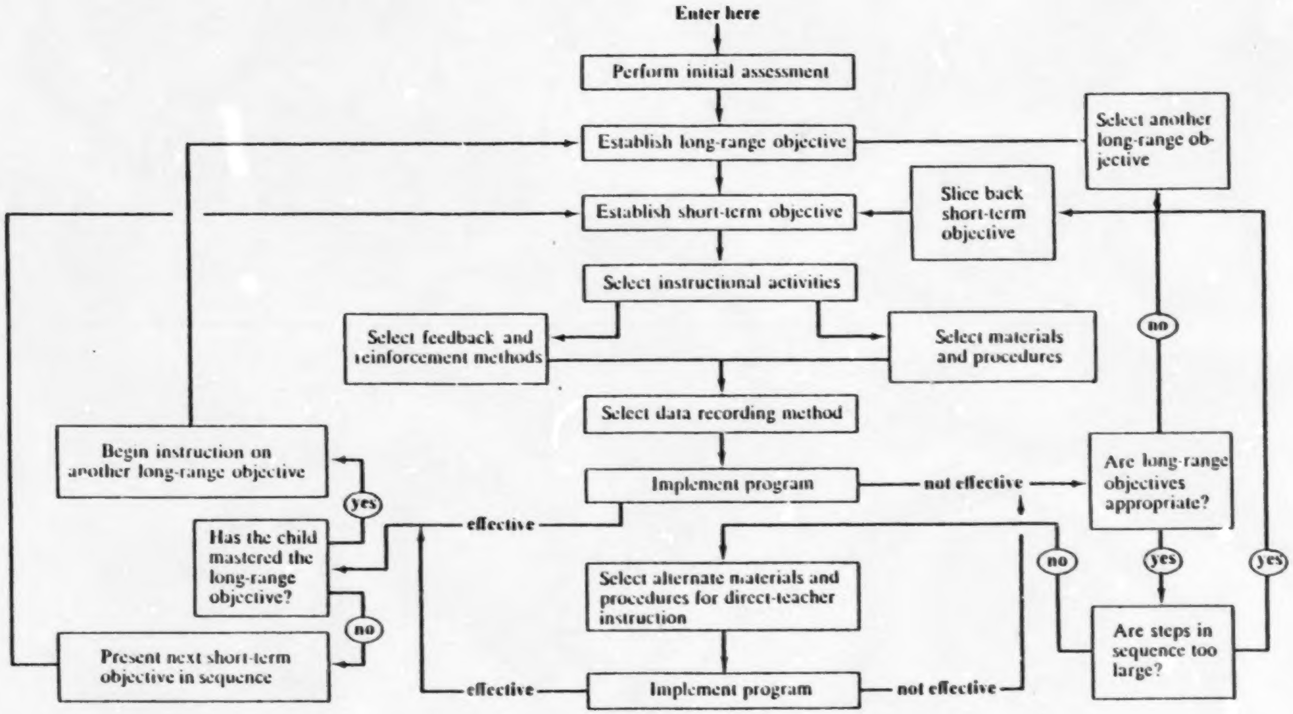

Enter here
Perform initial assessment
Establish long-range objective
Select another long-range objective
Establish short-term objective
Slice back short-term objective
Select instructional activities
Select feedback and reinforcement methods
Select materials and procedures
no
Select data recording method
Begin instruction on another long-range objective
Implement program
not effective
Are long-range objectives appropriate?
yes
effective
Has the child mastered the long-range objective?
no
yes
yes
Select alternate materials and procedures for direct-teacher instruction
no
Are steps in sequence too large?
Present next short-term objective in sequence
effective
Implement program
not effective

FIGURE 6. *Program Modifications When Program Is Ineffective During the Acquisition Stage*

Lowenbrau & Affleck. Teaching Mildly Handicapped Children in Regular Classes.
Charles E. Merrill Publishing Co., Columbus: 1976, p. 88. (Reprinted with permission of Merrill Publishing Co.)

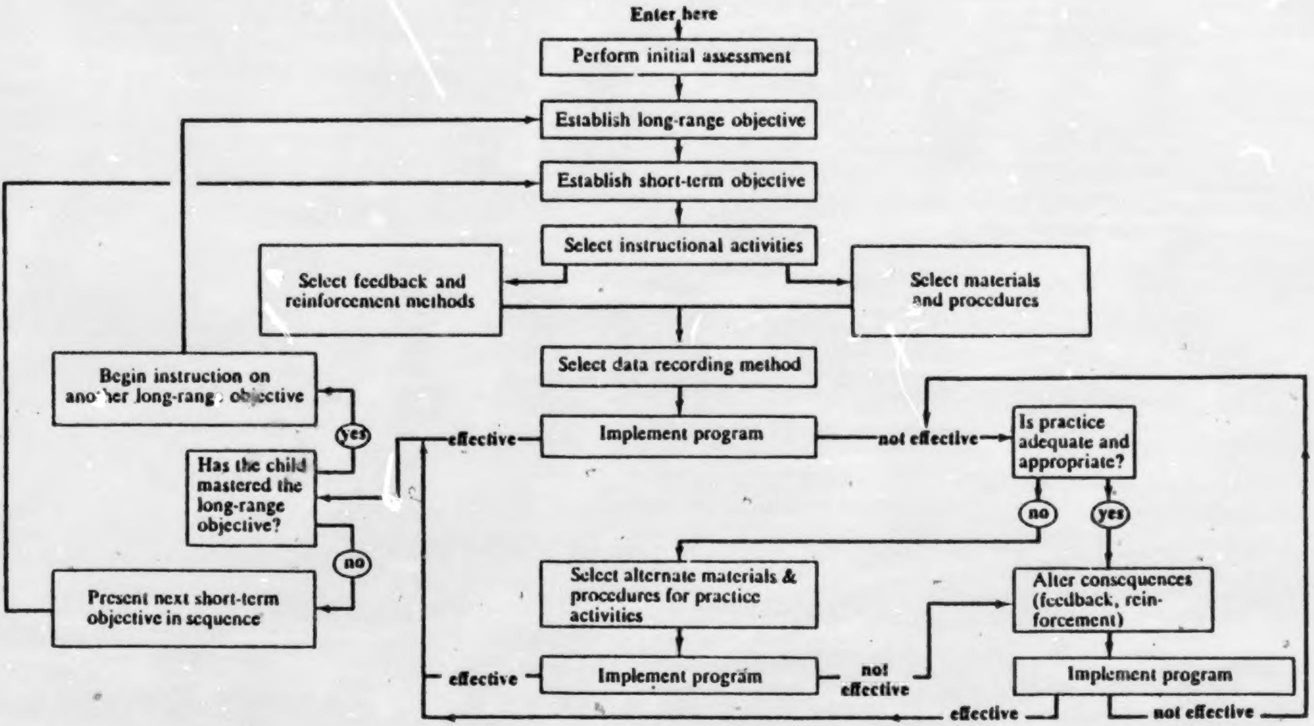

Enter here
Perform initial assessment
Establish long-range objective
Establish short-term objective
Select instructional activities
Select feedback and reinforcement methods
Select materials and procedures
Select data recording method
Begin instruction on another long-range objective
yes
Has the child mastered the long-range objective?
no
Present next short-term objective in sequence
effective
Implement program
not effective
Is practice adequate and appropriate?
no
yes
Select alternate materials & procedures for practice activities
Alter consequences (feedback, reinforcement)
effective
Implement program
not effective
Implement program
effective
not effective

FIGURE 7. *Program Modifications When Program Is Ineffective during the Proficiency Stage*[25]

Lowenbraun & Affleck. Teaching Mildly Handicapped Children in Regular Classes. Charles E. Merrill Publishing Co., Columbus: 1976, p. 91. (Reprinted with permission of Merrill Publishing Co.)